

PSYCHOLOGICAL ABSTRACTS

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CONTENTS

General.....	4327-4365
Sensation and Perception.....	4366-4386
Feeling and Emotion.....	4387-4394
Attention, Memory and Thought.....	4395-4404
Nervous System.....	4405-4415
Motor Phenomena and Action.....	4416-4422
Plant and Animal Behavior.....	4423-4435
Evolution and Heredity.....	4436-4444
Special Mental Conditions.....	4445-4464
Nervous and Mental Disorders.....	4465-4522
Social Functions of the Individual.....	4523-4586
Industrial and Personnel Problems.....	4587-4594
Childhood and Adolescence.....	4595-4618
Educational Psychology.....	4619-4661
Biometry and Statistics.....	4662-4666
Mental Tests.....	4667-4678

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AUTHOR INDEX

- Alberti, J. A., 4327
Anderson, R. E., 4639
[Anon.], 4328, 4329, 4366, 4387, 4445, 4446, 4465, 4466, 4523, 4524, 4619
Antipoff, H., 4595
Archer, C. P., 4620
Arndt, F., 4467
Ashley-Montagu, F. M., 4423

Baker, H. J., 4596
Banister, H., 4367, 4371, 4667, 4668, 4669, 4670
Banker, H. J., 4621
Barbado, M., 4330
Bard, P., 4388
Barnes, C. R., 4525
Barr, A. S., 4622
Bartsch, —, 4608
Beaumont, H., 4542
Behrend, G., 4447
Bennett, E. S., 4431, 4526
Bessau, —, 4608
Besterman, T., 4448
Beuter, —, 4468
Billings, T. H., 4527
Bills, A. G., 4416
Blishop, G. H., 4405
Blanshard, B., 4332
Bock, A., 4623
Bode, B. H., 4395
Bogardus, E., 4523
Bogorin, N., 4417
Böhm, J., 4449
Bolley, A., 4529
Borovski, V. M., 4333
Bosch, G., 4469
Böttger, —, 4608
Bovet, E., 4594
Bowman, K. M., 4530
Bowman, L. E., 4531
Branham, V. C., 4470
Brendel, —, 4608
Brewer, J. M., 4624
Bright, E. M., 4406
Broom, M. E., 4671
Brown, H., 4636
Brown, W., 4450
Brun, R., 4471
Rumke, O., 4472
Burdick, E. M., 4532
Burgess, E. W., 4533
Burr, M. A., 4625
Burtt, H. E., 4587
Bucalino, V. M., 4473, 4474
Buswell, G. T., 4636

Calkins, M. W., 4534
Cannon, W. B., 4368, 4389, 4406
Carreon, M. L., 4627
Chadwick, M., 4597
Chapin, F. S., 4628
Chappell, M. N., 4390
Chauncey, M. R., 4672
Christoleit, E., 4424
Ciampi, L., 4335, 4475, 4476
Cid, J. M., 4477
Claremont, C. A., 4396
Clark, A. H., 4436
Clostermann, —, 4608
Cobb, S., 4478
Cole, M. E., 4656
Collins, S. D., 4607
Conger, G. P., 4437
Constance, C. L., 4629
Courtols, A., 4479
Crittenden, E. C., 4336
Crosby, S. E., 4534
Crosland, H. B., 4369
Crow, W. B., 4438
Crosier, W. J., 4381, 4425
Cureton, E. E., 4673

Darrow, C. W., 4451
Darsie, M. L., 4630
Davis, R., 4631
Davis, R. A., 4337
Decker, F. J., 4596
De Eds, F., 4422
De Jong, H., 4480
De la Boullaye, H. P., 4535
De Lisl, —, 4481
De Melo, A., 4673
Dessmore, F., 4536
Dessauer, —, 4608
Dittmer, H., 4537
Drought, R. A., 4538
Dublineau, J., 4482
Ducas, C. J., 4539
Dück, —, 4540
Dugge, M., 4407
Dukes, C., 4452

Edgerton, H. A., 4632
Ehlinger, C., 4594
Ehlers, H., 4483
Eichkern, G. C., 4418
Eisenstein, I., 4484
Eisler, R., 4338
Elliot, H. S., 4633
Ellwood, J. K., 4634
Emery, E. V. N., 4541
Eng, H., 4598
Eustatziou, G., 4511
Eufert, —, 4608

Farnsworth, P. R., 4542
Fauley, G. B., 4410
Fauvel, —, 4485
Fearing, F., 4339
Federhofer, F., 4543
Fenton, N., 4340, 4341
Ferraro, A., 4408
Fisher, R. A., 4453
Flügel, J. C., 4544
Forbes, A., 4409
Foster, W. S., 4342
Fox, A., 4486
Franceschetti, A., 4370
Frankenheim, H., 4599
Franz, S. I., 4487
Freeman, F. N., 4674
Fröbe, J., 4343
Frostig, J., 4488
Furfey, P. H., 4600
Fürstenheim, —, 4608

Galt, E., 4545
Gardner, E., 4601
Garrison, K. C., 4635
Garrison, S. C., 4635
Gates, A. I., 4636, 4657
Gatti, E. M., 4469
Gault, R. H., 4637
Gehike, C. E., 4546
Geissler, L. R., 4344
Gemelli, A., 4345
Genil-Perrin, —, 4454
Gesell, A., 4602, 4603
Giese, —, 4608
Giese, F., 4547
Gillette, J. M., 4548
Gillon, A. S., 4405
Goldstein, K., 4489
Goodenough, F. L., 4675
Gould, S. E., 4337
Grage, —, 4608
Gregor, —, 4608
Grimpe, G. [Ed.], 4426
Groddeck, G., 4496
Grollman, A., 4491
Groves, E. R., 4549, 4604
Groves, G. H., 4604
Gruehn, W., 4550
Gumpel, B., 4551
Gundlach, R. H., 4346
Gürtler, —, 4608

Halde, C., 4588
Hambley, W. D., 4552
Hammer, L. F., 4553

Hanselman, —, 4608
Hartridge, H., 4371
Hatfield, H. S., 4554
Healy, W., 4347
Hecht, S., 4372
Hegner, C., 4373
Heinbecker, P., 4410
Heller, Th., 4608
Henze, —, 4608
Herbertz, —, 4555
Herold, —, 4608
Herrick, C. J., 4348
Herskovitz, M. J., 4556
Hill, A. S., 4596
Hill, L. B., 4492
Hoaglund, H., 4427
Hoffmann, W., 4589
Hofstätter, R., 4557
Holmes, S. J., 4397, 4428
Holtsopple, J. Q., 4374
Holtzclaw, H. F., 4664
Hovey, H. B., 4429
Howe, E. G., 4493
Huldschinsky, —, 4608
Hunter, W. S., 4430, 4398
Husband, R. W., 4431
Hypes, J. L., 4638

Illge, W., 4605
Inhoven, —, 4608
Ivy, A. C., 4419
Iwanow-Smolensky, A. G., 4494

Jacobi, —, 4608
Jacobsen, E., 4495
Jephson, I., 4455
Johnson, H. M., 4375
Jones, H. E., 4399

Kafka, G., 4608
Kahlbaum, —, 4608
Kapp, E., 4496
Karpman, B., 4497
Katz, —, 4608
Kelchner, M., 4606
Kelley, R. L., 4639
Kelley, T. L., 4662, 4663
Kellogg, W. N., 4340, 4376
Kemp, G. A., 4607
Kiesow, F., 4377
King, C. D., 4352
Klein, A. J., 4640
Kleist, K., 4498
Klemm, —, 4608
Knauer, A., 4641
Knauth, —, 4608
Knuth, W., 4558
Köhler, F., 4559
Kollarits, J., 4499
König, Ed., 4560
Krauss, S., 4608
Krueger, F., 4608
Kühn, H., 4561
Kürbitz, —, 4608

Lämmermann, H., 4642
Landis, C., 4391
Lange, W., 4603
Lapicque, L., 4411
Lashley, K. S., 4432
Lau, E., 4606
Lazar, —, 4608
Lesch, E., 4608
Lesemann, —, 4608
Leven, —, 4439
Lincoln, F. C., 4433
Lindner, R., 4608
Lodge, O., 4456
Loewenthal, J., 4440
Lorimer, F., 4400
Louttit, C. M., 4350
Lovitt, W. V., 4664
Löwenstein, —, 4608
Lowie, R. H., 4562
Lund, F. H., 4351

Maag, P., 4563
Macaulay, E., 4609
Mackenzie, W. D., 4564
Maier, H., 4500
Mann, O., 4643
Mansfield, H. L., 4501
March, H., 4565
Marchand, L., 4502
Mari, A., 4503
Marston, W. M., 4352
Martin, L. C., 4378
May, M. A., 4566
Mayer-Benz, L., 4504
McCarty, D. G., 4353
McCormick, M. J., 4567
McDougall, W., 4412
McGeoch, J. A., 4420
Mead, M., 4610
Mell, R., 4457
Meicher, R. T., 4505
Meltzer, —, 4608
Menkin, V., 4406
Metzger, K., 4508
Meyer, E., 4506
Milt, B., 4507
Miner, J. B., 4354
Moore, R. M., 4406
More, A., 4569
Morgan, T. H., 4441
Moses, —, 4608
Muñoz, J. J., 4644
Murchison, C. [Ed.], 4355
Mursell, G. R., 4570
Myrick, H. L., 4508

Nachmansohn, M., 4509
Nafe, J. P., 4370, 4380
Newsom, J., 4369
Newton, G. Y., 4645
Newton, H. F., 4406
Nobling, E., 4611
Nyswander, D. B., 4356

Ogburn, W. F., 4571
Oosterlee, P., 4401
O'Shaughnessy, L., 4646

Palmer, A. R., 4647
Parker, G. H., 4381
Payne, G. H., 4612
Pedersen, V. C., 4572
Petersen, P., 4648
Pfeifer, —, 4608
Phelan, G. B., 4573
Piechowski, P., 4574
Pierce, J. T., 4510
Pierce, S. W., 4510
Pintner, R., 4676
Poe, D. L., 4413
Popea, A., 4511
Popenoe, P., 4613
Poppen, J. R., 4382
Poppi, V., 4414
Prakken, J., 4480

Rabaud, E., 4442
Raines, L., 4392
Ramos, P., 4627
Ranschburg, P., 4608
Redallé, L., 4512
Remmers, H. H., 4649
Rexroad, C. N., 4357
Rey, A., 4358
Richard, G., 4575
Richardson, T. C., 4378
Richardson, L. F., 4402
Richtzenhain, W., 4513
Robertson, W. L., 4665
Robinson, R., 4383
Robinson, V., 4359
Rohlf, H. F., 4590
Rombach, J., 4614
Römer, A., 4576
Rosenbaum, —, 4608
Rosenow, C., 4360
Ruch, G. M., 4650

Sacristan, J. M., 4615
Saltmarsh, H. F., 4458

Sander, —, 4608
Santafé, F. C., 4616
Schlegel, A., 4514
Schindler, R., 4591
Schmidt, —, 4608
Schmidt, H., 4361
Schmucker, S. C., 4443
Schneck, M. M. R., 4677
Schneider, C., 4577
Schorer, G., 4421
Schrader, —, 4578
Schreiner, —, 4608
Schröder, —, 4608
Schulte, —, 4608
Schumann, —, 4608
Schwab, —, 4608
Schweitzer, C., 4579
Scott, H. A., 4651
Selfert, F., 4459
Selke, E., 4652
Shannon, J. R., 4653
Simmel, G., 4515
Sims, V. M., 4678
Sirkin, M., 4654
Skaggs, E. B., 4418
Smith, J. M., 4655
Snodgrass, R. E., 4434
Spreng, M., 4384
Steckel, H. A., 4516
Sterling, E. L., 4656
Stern, F., 4608
Steyerthal, A., 4460, 4461
Suter, J., 4592
Swetlow, G. I., 4415

Taube, —, 4608
Taylor, A. H., 4336
Taylor, H. R., 4369
Thoms, C. S., 4435
Thorndike, E. L., 4657
Thorp, A., 4658
Tinker, M. A., 4342
Többen, —, 4608
Tobie, H., 4617
Toops, H. A., 4632
Törnelli, G., 4444
Tower, J. L., 4517
Troland, L. T., 4385
Tryon, R. C., 4666
Tumarkin, A., 4362
Turin, L., 4590

Van Wagenen, M. J., 4659
[Various.], 4393, 4394
Villinger, —, 4608
Voegtlin, C., 4422
Volkelt, H., 4608

Walker, N., 4462
Walther, L., 4593, 4594
Watson, J., 4363
Watson, J. B., 4364
Watt, H. J., 4463
Weber, H., 4581
Wegwitz, —, 4608
Weigl, F., 4618
Westermarck, E., 4582
Wever, E. G., 4386
Wewel, A., 4464
Wheeler, H. E., 4660
Wiesl, P., 4518
Wiesner, —, 4608
Wiggam, A. E., 4661
Wildfeuer, G., 4583
Wilkins, M. C., 4403
Winkler, —, 4608
Winsor, A. L., 4404
Wirz, E., 4384
Wissler, C., 4584
Woodworth, R. S., 4365
Wright, H. W., 4585
Würz, P., 4519
Wyndham, H., 4586

Zalla, M., 4520
Ziloch, A., 4521
Zueblin, E., 4522

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GENERAL

4327. **Alberti, J. A.** *Los estudios psicológicos en la escuela de medicina.* (Psychological studies in the medical school.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 30-39.—In addition to the usual biological, chemical, and physical studies which precede medical courses, it is now planned to include courses in psychology and philosophy in the Rosario Institute. Logic would be stressed. Bleuler has said, "A psychiatry without psychology is pathology without a philosophy."—*J. W. Nagge* (Chicago).

4328. [Anon.] *The earliest motion pictures.* *Science*, 1929, 70, 594.—An account of the celebration at Stanford University of the fiftieth anniversary of the researches of Stanford and Muybridge on the photographic portrayal and analysis of the motion of the horse.—*R. R. Willoughby* (Clark).

4329. [Anon.] *The Ninth International Congress of Psychology at Yale University.* *Scient. Mo.*, 1929, 29, 380-384.—*J. F. Dashiell* (North Carolina).

4330. **Barbado, M.** *De psicología.* (Psychology.) *Ciencia Tomista*, 1929, 21, 270-294.—De Sanetis's *Psicologia Sperimentale*, Vol. I, Rome, 1929, is a study of experimental psychology as a science. It discusses methods, the internal activity and the ego. Appropriate chapters are dedicated to the discussion of consciousness and subconsciousness as a part of a common system. De Sanetis draws a line of division between psychic phenomena and sensations from the psychophysical point of view. In the last chapters he discusses movement in general, voluntary reactions, language, handwriting, imitation. He defines experimental psychology as a science of psychophysical facts, or the science of the soul. Vol. II, *Applied Psychology*, will be published later. In Dwelshauvers's *Traité de Psychologie*, Paris, 1928, the author endeavors to justify the scholastic point of view. One volume of Fröbes' *Psychologia speculativa in usum scholarum*, Freiburg, 1927, is devoted to the discussion of sensitive life, and the other to rational life. There is a list, with publishers, etc., of other works of interest in this field.—*L. A. Ondis*.

4331. **Bennett, E. S.** *Consciousness and reality.* *Psyche*, 1929, 9, 61-73.—The concept *consciousness* is an abstraction which arose out of the human organism's effort to coordinate varieties of impressions received through the sense organs. What is commonly known as the real world is merely a complicated mathematical figure, an abstraction after all. Science knows things only in mathematical abstractions. As to reality, much fallacy arises from a disinclination to keep separate the abstract and the

concrete. If we are not willing to believe in some kind of thing-in-itself independent of human scientific categories, the evidence of a positive concrete existence is small. Experience is to be regarded as a cross-section of the space-time continuum. The present is only a part in a series. The problem of the occult becomes that of the conflict between the so-called normal experience and evidence strong and cumulative supporting belief in alleged phenomena of telepathy, clairvoyance, water-finding, etc.—*T. R. Garth* (Denver).

4332. **Blanshard, B.** *Behaviorism and the theory of knowledge.* *Phil. Rev.*, 1928, 37, 328-352.—The author gives a criticism of behaviorism in its bearing on the theory of knowledge. The more scientific doctrines of Watson do not deal adequately with ideal objects, images, or sense-data. In Holt's philosophy there is an attempt to deal with these problems. Holt agrees that thought is a bodily response, but he has an elaborate theory concerning the objects of knowledge. These are neither physical nor mental, but neutral universals. Five detailed criticisms are urged against Holt's theories.—*A. P. Brogan* (Texas).

4333. **Borovski, V. M.** *Psychology in the U. S. S. R.* *J. Gen. Psychol.*, 1929, 2, 177-186.—The State Institute for Experimental Psychology at Moscow is the only special psychological institution and the most important center for scientific psychology in the Soviet Union. Its methodological principles are characteristic of life in general in the U. S. S. R. It is opposed to the extreme reflexological exaggerations of Pavlov and Bekhterev. In the State Institute Kornilov is director and in charge of the section of general psychology, child psychology is headed by Rybnikov, zoopsychology by Borovski, and psychotechnics by Spilrein. The Institute is attempting to build a psychology on the principles of dialectical materialism, but conscious activities are not entirely excluded. The members of the Institute have been influenced by American behaviorism, and some of the junior fellows are showing an interest in *Gestalt* psychology.—*H. Cason* (Rochester).

4334. **Calkins, M. W.** *Analysis: chemical or psychological? A comment on Raymond Wheeler's 'The Action Consciousness.'* *Psychol. Rev.*, 1929, 36, 348-352.—The author questions the soundness of Wheeler's conclusion that the introspections of the Wells observers should be discredited on the ground of incompleteness of their analysis. Wells and Wheeler understand and use analysis in different ways, the former seeking to find the constituents of an experience, the latter asking what an experience 'gives way to' or 'becomes.' The one is psychological analysis, the other chemical.—*H. Helson* (Bryn Mawr).

4335. Ciampi, L. [Ed.] *Boletín del Instituto Psiquiátrico*: Rosario, Argentina. 1929, 1, 1-64.—The journal is a publication of the faculty of the Institute of Psychiatry of Rosario. The contributors to the first issue are members of the staff of the Institute, and the publication will be concerned chiefly with its work. The first issue is given over to a series of clinical studies made in the Rosario laboratories. Articles are contributed to the first number by L. Ciampi, A. Foz, J. L. Alberti, J. M. Cid, G. Bosch and E. M. Gatti. The contents of the journal are abstracted separately (see III: 4327, 4469, 4475, 4476, 4477, 4486).—J. W. Nagge (Chicago).

4336. Crittenden, E. C., & Taylor, A. H. An interlaboratory comparison of colored photometric filters. *Trans. Illum. Eng. Soc.*, 1929, 24, 153-197.—This paper reports results of measurements by seven laboratories, using more or less diverse methods, on photometric color filters ranging from dark red to purplish blue. Six laboratories made spectrophotometric measurements, from which integral transmissions for light corresponding to a color temperature of 2680 K were calculated by means of the standard values for visibility of radiation. Transmission factors so found were very consistent. Measurements made by flicker and by equality-of-brightness photometers gave average results not systematically different from those calculated from the spectral transmissions, but with both types of photometer there were discrepancies between laboratories. Different types of equality-of-brightness photometers also gave quite different results in measurements made by a single group of observers. In one laboratory the flicker photometer was found to underrate reds and overrate blues slightly, while in two other laboratories these relative values were reversed. The net result of the project is to establish very reliable values for sets of filters to be used in all these laboratories, as well as to show the practicability and propriety of using spectrophotometric measurements as a basis for standard values. The relative merits of flicker and equality-of-brightness photometers remain a subject for argument, but it is believed that the more systematic character of flicker results will make it possible to find an explanation for the small outstanding discrepancies in results obtained by this method.—L. L. Sloan (Johns Hopkins).

4337. Davis, R. A. & Gould, S. E. Changing tendencies in general psychology. *Psychol. Rev.*, 1929, 36, 320-331.—This paper is an attempt to examine the content of a number of representative texts in general psychology published over a period of thirty-nine years, and to note general tendencies in psychological theory and practice. A table containing 29 topics and the number of chapters and pages devoted to each is given. There is also a summary of topics in order of importance.—H. Helson (Bryn Mawr).

4338. Eisler, R. *Wörterbuch der philosophischen Begriffe*. (Dictionary of philosophical concepts.) Berlin: Mittler & Sohne, 1929. Bd. 3, Lfg. 16, 385-512. M. 5.50.—W. S. Hunter (Clark).

4339. Fearing, F. René Descartes. A study in the history of the theories of reflex action. *Psychol. Rev.*, 1929, 36, 375-388.—Descartes, more than any other man, is responsible for concepts of neuromuscular function which are acceptable in their major outlines to present-day physiologists. Detailed accounts, supplemented by quotations from his writings, are given of Descartes' views of automatic action, animal spirits, and reflex action. 11 references are given in the bibliography.—H. Helson (Bryn Mawr).

4340. Fenton, N. Elmer Ernest Southard: a bibliography of his writings. *J. Juv. Res.*, 1929, 13, 181-196.—H. L. Koch (Texas).

4341. Fenton, N. Elmer Ernest Southard and social psychiatry. *J. Juv. Res.*, 1929, 13, 178-180.—H. L. Koch (Texas).

4342. Foster, W. S., & Tinker, M. A. *Experiments in psychology*. (Rev. ed.) New York: Holt, 1929. Pp. xv + 392.—This is a thoroughgoing revision by Tinker of the late Professor Foster's 1923 volume. It has been enlarged and rewritten to a large extent. A greater latitude in choice of experiments is now possible. Whereas the first edition contained 24 experiments, the revision has 32. Four of the old experiments have been dropped, viz.: "Reflex Organic Responses," "Weber's Law," "Taste and Smell," and "Filled and Empty Time." The 12 experiments added to the remaining 20 are: "The Learning Curve," "Rational Learning," "Animal Learning," "Span of Visual Apprehension," "Measurement of Musical Talent," "Measurement of Reading Ability," "Affective Value of Colors," "Measurement of Art Talent," "Individual Differences," two experiments on "Special Phenomena of Vision," and "Learning and Interference in Card Sorting." The general order of presentation has been altered considerably. "The statistical computations have been reduced to a minimum by decreasing greatly the number of problems in each experiment." The make-up of the book is such as to suggest that statistical method is incidental rather than the chief object. "Mathematical tables have been included to facilitate calculations. Greater emphasis is placed on method and interpretation; less on computation." The general utility of the book has been enhanced in that about half the experiments are equally adaptable to laboratory courses in general psychology and educational psychology. As in the case of the former volume, a pamphlet of notes for instructors has been prepared to accompany the student's text.—F. A. Geldard (Virginia).

4343. Fröbes, J. *Lehrbuch der experimentellen Psychologie*. Bd. 2. (Textbook of experimental psychology.) Freiburg: Herder, 1929. Pp. xxvii + 647. M. 20.—W. S. Hunter (Clark).

4344. Geissler, L. R. The objectives of objective psychology. *Psychol. Rev.*, 1929, 36, 353-374.—The author defines the term "objectives" and then attempts to determine what are the objectives of the physical and biological sciences. After a discussion of what is meant by "objective psychology" the question is asked, "What are the objectives of the

science of objective psychology?" The author's answer to this question is that psychology is one of the sciences of human nature which, from the existential and the genetic point of view, deals with the concrete ways in which human beings are impressed by, and respond to, their physical and social environment. Measurement in psychology, as in the other sciences, should never be looked upon as an aim in itself, but merely as a means to an end, in that it helps to greater accuracy of observation and clearer statement of results.—*H. Helson* (Bryn Mawr).

4345. **Gemelli, A. Agostino Gemelli.** In *Die Philosophie der Gegenwart in Selbstdarstellungen*. Bd. 7. (Agostino Gemelli.) Leipzig: Meiner, 1929. Pp. 67. M. 3.50.—*W. S. Hunter* (Clark).

4346. **Gundlach, R. H.** Four sources of confusion in psychological theorizing. *Psychol. Rev.*, 1929, 36, 285-306.—The four problems leading to confusion are the following: (1) the relation between sensory process and stimulus; (2) the distinction between subjective and objective; (3) the mind-body problem; (4) the use of the methods of mathematics (the postulatory method) in the natural sciences. The possible philosophical positions with respect to these problems are set forth and critically examined, after which the author concludes: certain psychologists, holding to one or two possible theories of perception, have played fast and loose with facts, confusing distinguishable features of perception; the method of introspection criticized by most behaviorists is not typical of the 'introspectionists'; neither vitalism nor mechanism need be accepted as the solution to the mind-body problem, because there are in addition the 'emergent' views. Because natural sciences are interested in what exists and mathematicians are not, the postulatory method is not applicable to the natural sciences.—*H. Helson* (Bryn Mawr).

4347. **Healy, W. Elmer Ernest Southard: an appreciation.** *J. Juv. Res.*, 1929, 13, 176-177.—*H. L. Koch* (Texas).

4348. **Herrick, C. J.** The thinking machine. Chicago: Chicago Univ. Press, 1929. Pp. 374. \$3.00.—A popular exposition of the author's belief that man is a machine having conscious and physical aspects.—*W. S. Hunter* (Clark).

4349. **Kellogg, W. N.** An improved photometer for measuring brightness thresholds in hundredths of a meter candle. *J. Gen. Psychol.*, 1929, 2, 369-377.—The apparatus was constructed for the purpose of obtaining comparative data on different thresholds for light intensity by means of the equality of brightness method. The instrument possessed the following features: "(1) Differences in color between the standard and comparison stimuli were effectively eliminated without the necessity of introducing flicker. (2) A dark room was not required in which to operate the photometer but reliable readings were obtainable in fully illuminated surroundings. (3) Careful calibration permitted the immediate conversion of threshold values into meter-candle units. (4) Readings could be obtained either graphically or from a linear scale. (5) The photometer could be used as desired with the Method of

Average Error, the Method of Minimal Change, or the Method of Constant Stimuli."—*H. Cason* (Rochester).

4350. **Louitt, C. M.** The use of bibliographies in psychology. *Psychol. Rev.*, 1929, 36, 341-347.—The number of bibliographies published in seven countries is given for seven different periods. The United States leads, with Germany and Great Britain next in order. There has been an increase in the number of bibliographies published, except during the war and shortly thereafter. A number of comments are made on the adequacy of the bibliographies published, with some suggestions as to the manner of their presentation.—*H. Helson* (Bryn Mawr).

4351. **Lund, F. H.** The phantom of the Gestalt. *J. Gen. Psychol.*, 1929, 2, 307-323.—A detailed criticism of Gestalt psychology. "The Gestalt, with the rendering it has been given by its leading exponents, has no assignable value in psychological description nor any real existence within the experimental sequence, because: (1) It is assumed to be of non-empirical origin, existing with the first experience and not a product of experience, and hence, of the same abstract and phantom-like nature attributable to the Hegelian Universals and Platonic Forms. (2) It is considered immune to the modifying influences of sensational elements and changing circumstances of experience. (3) It cannot be identified with the stimulus aspects of experience because these constitute too changing and fluctuating a material. (4) Nor can it be identified with the response coordinations, perceptual or overt, since the ordered and structural features of these are well known and do not possess the novelty attributed to the Gestalt."—*H. Cason* (Rochester).

4352. **Marston, W. M., & King, C. D.** The psychonic theory of consciousness—an experimental study. *Psyche*, 1929, 9, 39-57.—As regards the question of consciousness, the present situation in psychology demands some rational viewpoint which shall serve as a possible basis for the various schools. The writers recommend that the psychonic hypothesis of Marston be taken for this purpose, since it offers experimental possibilities for laying bare objective evidence of the nature of consciousness. An experiment was planned which might possibly show the nature of the introspective mechanism, i.e., the relationship between the quantity of consciousness introspectively estimated and quantitative measurements of synaptic phenomena. The latter were synaptic delay and synaptic after-discharge. However, the introspective estimates of total quantity of consciousness were unreliable, and so could not be used for testing the psychonic theory. Consequently, further experimentation will be necessary.—*T. R. Garth* (Denver).

4353. **McCarty, D. G.** Psychology for the lawyer. New York: Prentice-Hall, 1929. Pp. 723. \$6.00.—" . . . This volume has been written particularly for the practicing lawyer—to meet the needs of his profession. . . . Psychology and modern science have made a distinct contribution to law, by pointing out that many of our traditional legal methods no longer meet the conditions of modern life. They too often

run counter to human nature and social experience. . . . In regulating the daily life of the people the regulations must keep pace with the things regulated. . . . Law deals with human conduct, and without a breadth of human sympathy no lawyer can know the law in its manifold applications to human problems. . . . It must be apparent to any student of the theory and principles of the law that we must rewrite our law of evidence and method of proof of facts in the light of the knowledge gained by psychology and in line with modern human experience." The first eight chapters are concerned largely with a general introduction to psychology, with particular emphasis upon habit, motivation, emotion, and memory. In the remaining chapters of the book the following topics are discussed: suggestion, testimony, and evidence; individual differences; psychoanalysis, abnormal psychology, and psychiatry in relation to criminal law, and the problems of the lawyer in his relations with clients and his conduct of cases. Six appendices of illustrative material, a bibliography of 128 titles, a table of the many cases cited throughout the text, and an index, are included.—*G. L. Barclay* (Nebraska).

4354. **Miner, J. B.** *The procedure of thinking about mind.* *Psychol. Rev.*, 1929, 36, 332-340.—A non-mechanistic view of mind may be possible which is more useful for prediction and control than the usual mechanical hypothesis. The search for a monistic universe involves the danger of neglecting facts which do not fit into a system. It is possible that a pluralistic universe is as essential for understanding man as a monistic universe.—*H. Helson* (Bryn Mawr).

4355. **Murchison, C. [Ed.]** *The foundations of experimental psychology.* Worcester, Mass.: Clark Univ. Press, 1929. Pp. x + 907. \$4.00 (later \$6.00).—This book contains 23 chapters by various authors on the subjects which the editor considers most fruitful for further experimentation. Each chapter is abstracted separately (see III: 4367, 4368, 4371, 4372, 4374, 4379, 4381, 4385, 4388, 4391, 4398, 4409, 4425, 4432, 4441, 4487, 4566, 4584, 4602, 4662, 4663, 4674, 4676).—*M. B. Mitchell* (Yale).

4356. **Nyswander, D. B.** *A comparison of the high relief finger maze and the stylus maze.* *J. Gen. Psychol.*, 1929, 2, 273-289.—The use of the high relief finger maze is more economical of laboratory time than is the stylus maze. There is some evidence for believing that a high relief maze may be constructed to yield more reliable scores than a stylus maze of the same pattern. If the stylus maze is of simple pattern, there is a possibility of the corresponding high relief finger maze's being too simple and consequently unreliable; the pattern of the stylus maze retains its difficult and its simple elements when it is reproduced in the high relief maze. This new and perhaps important type of laboratory apparatus should prove useful because of its potential ability to measure learning in a reliable and time-saving manner, both for general laboratory work and experimental purposes.—*H. Cason* (Rochester).

4357. **Rexroad, C. N.** *General psychology for college students.* New York: Macmillan, 1929. Pp. xv + 393. \$2.10.—A general text-book written from the behavioristic point of view. The author states the assumptions underlying behaviorism, and formulates his position in terms of (1) five scientific principles of behavior, (2) five postulated principles of human behavior, and (3) three corollaries of the postulated principles. The specific tasks of psychology are found to be (1) to describe behavior (a) bio-physically and (b) bio-socially; (2) to discover the stimulating conditions for the responses described; (3) to account for each bit of behavior (a) in terms of structure, as demanded by the postulated principles; and (b) in terms of the nature of the fertilized ovum and past environment as demanded by the corollaries. Chapters 3 and 4, which are intended to present those biological and physiological concepts that throw most light on the problems of human behavior, deal with the concept of metabolic gradient as developed by Child and others. Chapter 5 treats of the sensori-neural equipment of man. The genetic study of behavior is emphasized in Chapter 6. The category of "unlearned behavior" is substituted for the older one of "instinct" in Chapter 7. "Unlearned responses are those made when the eliciting stimulus or one similar to it has not necessarily occurred previously." Chapters 8 to 16 inclusive are devoted to various aspects of learning in animals and man. There are, according to the author, five types of learning: simple conditioning, substitution of response, negative adaptation, serial habits, and trial and error. The last part of the book deals with individual differences, intelligence, personality, ideals and purposes. A suggested list of collateral reading follows each chapter.—*W. C. Beasley* (Ohio State).

4358. **Rey, A.** *French philosophy in 1926 and 1927.* *Phil. Rev.*, 1928, 37, 527-556.—This article reviews recent French philosophy and includes accounts of psychological work: on language and on art by Delacroix, on child psychology by Piaget, on intelligence by Bourdon, on psychoanalysis by Allendry, on comparative psychology by Goldsmith, and on experimental psychology by Piéron.—*A. P. Brogan* (Texas).

4359. **Robinson, V. Johannes Evangelista Purkinje (1787-1869).** *Scient. Mo.*, 1929, 29, 217-229.—Biographical notes on this early research worker in physiological optics, cytology, pharmacology, and other phases of physiology.—*J. F. Dashiell* (North Carolina).

4360. **Rosenow, C.** *In reply to the rescuer.* *Psychol. Rev.*, 1929, 36, 450-451.—The author corrects Weiss's statement that he cannot get along without the concept of purpose; what he said is that some "physiologists" cannot do so. Purposive acts belong to a class of verifiable facts, and so long as there is disagreement about such acts an important problem is shown to be unsolved; it does not follow that those upholding the concept are incompetent.—*H. Helson* (Bryn Mawr).

4361. **Schmidt, H.** *Vom Wesen und der Bedeutung des Gestaltproblems.* (On the essence and

the significance of the *Gestalt* problem.) *Hilfsschule*, 1929, 21, 193-200.—The author investigates the possibility of applying the results obtained by *Gestalt* psychology to the practice of pedagogy. In his exposition he first considers a lecture by A. Kiessling: *Developmental tendencies of pedagogical psychology*. (*Zsch. f. päd. Psychol.*, 1929, 30, No. 1.) In the following section he presents Petermann's criticism of Wertheimer, Koffka and Köhler. (Petermann: *Wertheimer's, Koffka's and Köhler's Gestalt theory and the problem of Gestalt*. Leipzig: Barth, 1929.) The author shows that the use of the psychological concept of *Gestalt* is especially necessary when immediate appeal to the quantitative method is impossible or difficult. The proof that quantitatively equivalent stimuli are phenomenologically different in corresponding configurations is important. The author thinks that according to the condition of things the auxiliary school teacher must, in his entire attitude toward his work, take into account the *Gestalt* problem.—O. Seeling (Berlin).

4362. Tumarkin, A. *Die methoden der psychologischen Forschung*. (The methods of psychological investigation.) Leipzig: Teubner, 1929. Pp. 32. M. 5.—In order to orient the reader in the controversy on methods prevailing today in psychology, this pamphlet attempts to recognize the original motives of the various methods which are of scientific significance. From this point of view it considers the methods of (1) explanatory psychology, which places the phenomena of psychic life in the general causal connection of natural phenomena (including (a) the experimental method, which like mathematical natural science, analyzes the phenomena of psychic life into their simplest factors; and (b) the genetic method, which, like biology, attempts to explain these phenomena on the basis of a unitary structural coherence of life); (2) descriptive psychology, which limits itself to an analytic description of the phenomena of life, renouncing all explanations (including (a) the analytic description of the phenomena of life that can be perceived as spatial-temporal relations, (b) the analysis of the contents of consciousness as sought in "inner perception," and (c) the philosophical analysis of consciousness considered as a unitary connection of the functions of knowledge); and (3) the methods of understanding psychology, which conceives life as an original and unanalyzable connection presupposed by all explanation and all description of psychic life (comprising the understanding of life on the basis of its unitary idea, or of the various ideal types representing the fundamental forms of mind, or finally through itself in the totality of its individual reality). In the case of the psychology which claims to understand the individual as a unity comprising the totality of psychic phenomena and yet unanalyzable, the author exposes the original conflict of two fundamental tendencies in all psychological thinking: (1) to classify the separate psychic phenomena within a unitary connection of experience, and (2) to recognize that unity of life which expresses itself in all those phenomena. Finally, this conflict, which appears especially clearly in the present controversy on psychological methods, is ex-

plained by the fact that psychological thinking is based originally on other than purely theoretical interests.—A. Tumarkin (Berne).

4363. Watson, J. *The philosophy of Plotinus*. *Phil. Rev.*, 1928, 37, 482-500.—The writer reviews recent works on Plotinus and gives a critical summary of his philosophy. He includes a short account of the psychological theories of Plotinus. The world of nature comes from a cosmic World-Soul, which in turn comes from an Intelligence or Nous which comes from the absolute One. Particular souls fall away from the World-Soul and become bound up with special bodies. In human beings the power of perception which belongs to the soul must be concerned with the apprehension, not of sensibles, but rather of the imprints left by sense-perception on the animal nature. Perception is not a mere passive reception. It is an energy or activity. Perception has a physical basis, but memory is entirely within the soul. Feeling belongs to the body, though the perception of it is in the soul. Innate ideas are potentially present in the soul. Imagination is the psychological organ of memory and of self-consciousness. Higher than consciousness is self-knowledge, in which the knower is identical with the known. Higher still is the oneness with the Absolute in which even thought disappears.—A. P. Brogan (Texas).

4364. Watson, J. B. *Psychology; from the standpoint of a behaviorist*. (3d ed., rev.) Philadelphia: Lippincott, 1929. Pp. 475. \$3.00.—W. S. Hunter (Clark).

4365. Woodworth, R. S. *Psychology*. (Rev. ed.) New York: Holt, 1929. Pp. 590. \$2.50.—The author maintains the same eclectic position with reference to the various theoretical points of view which characterized his first edition. Although account is taken of the progress of experimental work in psychology since 1921, the chief difference between the two editions is in the arrangement of topics. The chapter headings of the second edition are as follows: what psychology does; intelligence; memory; learning; heredity and environment; how activity is aroused—the stimulus and motive; feeling and emotion; imagination; physiological psychology; and personality.—W. S. Hunter (Clark).

[See also abstracts 4348, 4395, 4422, 4437.]

SENSATION AND PERCEPTION

4366. [Anon.] *Exercise for deaf ears*. *Science*, 1929, 70, xii.—An account of the work of Skrizki of Leningrad and Muelwert of Darmstadt. Tonal islands of residual hearing are first located, and these are broadened by intensive exercise; Muelwert uses waves of 30,000 vibrations per second.—R. R. Wiloughby (Clark).

4367. Banister, H. *Hearing: I*. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 273-312.—A brief presentation of the physics of sound is followed by a discussion of tones. This includes such topics as pitch, number of vibrations for perception of tone, pitch discrimination, tonal islands and gaps, loudness, limits of intensity for audition, in-

tensity difference limen, and total number of pure tone sensations. Compound tones and noises are found to differ only in degree. The phenomena of beats, combination tones, consonance, and dissonance are discussed. Sections are devoted to auditory perception of space, speech and deafness, and fatigue. Bibliography.—*M. B. Mitchell* (Yale).

4368. Cannon, W. B. **Hunger and thirst.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 434-448.—Appetite is a desire for a repetition of a previously experienced pleasantness. Hunger is recognized as a disagreeable pang, ache, or gnawing located in the epigastrium. The old theory that hunger is a general sensation due to a deficiency of food in the blood is shown to be inadequate. Experimental evidence is given to prove that the sensation of hunger is due to contractions in the stomach. These are aroused locally, for they take place even when the nerves connecting the stomach with the brain and spinal cord are severed. Thirst is a disagreeable dryness of the mouth and pharynx accompanying a general deficiency of water in the body. Whenever there is a shortage of water, the percentage in the blood remains fairly constant at the expense of the salivary glands. Pack found that when the salivary glands were artificially stimulated to secrete by means of pilocarpine, rabbits would refuse water entirely or barely touch it even after they had been deprived of it for seven days. This among other experiments indicates that thirst is a local sensation of dryness caused by a deficient flow of saliva. Thus hunger and thirst are both local rather than general sensations. Bibliography.—*M. B. Mitchell* (Yale).

4369. Crosland, H. R., Taylor, H. R., & Newsom, J. **Practice and improvability in the Müller-Lyer illusion in relation to intelligence.** *J. Gen. Psychol.*, 1929, 2, 290-306.—With 33 subjects the authors found (1) no significant correlation between intellectual rating and susceptibility to error in the perception of the lines of the Müller-Lyer illusion figure, regardless of whether that error was measured as the initial error, the mean error of 30 daily trials, or the final error; (2) a very slight suggestion of a possible positive relationship between high intelligence and low error in the illusion; (3) definite practice effects over a period of 30 daily trials, involving an initial decrease of error less rapid than usual, followed by a gradually lessening amount of error from then on; (4) no significant correlation between intellectual rating and amount of improvement resulting from practice; (5) that initial ability was slightly and positively prognostic of final ability, such prognostication, however, being relatively hazardous; and (6) that subjects of higher intelligence tended to overcorrect the illusion figure in the late stages of practice, while subjects of lower intelligence tended to undercorrect the figure even after they had had much practice. 4 figures.—*H. Cason* (Rochester).

4370. Franceschetti, A. **Die Bedeutung der Einstellungsbreite am Anomaloskop für die Diagnose der einzelnen Typen der Farbsinnstörung, nebst**

Bemerkungen über ihren Vererbungsmodus. (The significance of the focal width with the anomaloscope for the diagnosis of the individual types of disturbance in color vision, with a few remarks on their mode of inheritance.) *Schweiz. med. Woch.*, 1928, 58, 1273-1279.—The determination by the anomaloscope of the so-called "focal width" offers us a more refined diagnosis of disturbances of the color sense. By focal width is to be understood that zone in which a complete color balance is obtained. This zone lies between the red-green mixture (corresponding to the wave-lengths of lithium and thallium lines) and sodium light of a corresponding brightness. He then explains the diagnostic principle of the different kinds of disturbance of the color sense on the basis of experiments by Schmidt and Haensch with the anomaloscope. He gives graphs and tables of the middle focus and its variation width (standard deviation) in deuteranopia (30 cases) and protanopia (32 cases). It appears very clearly that the two curves for protanopics and deuteranopics intersect just where the Rayleigh equation of the normal lies. This was explained and emphasized by Seebeck before. The author further treats the question of color sense disturbances from the point of view of human heredity. On the basis of the refined diagnosis the author succeeds in bringing the statistically estimated number of color-blind women into harmony with theoretic calculations. Also with regard to the study of heredity we get new suggestions for the study of multiple allelomorphs. Bibliography of 21 titles.—*M. R. Lambercier* (Geneva).

4371. Hartridge, H., & Banister, H. **Hearing: II.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 313-349.—After a description of the anatomy of the ear, the various theories of hearing are presented and criticized. Experimental evidence for the various theories has been obtained by investigations of pathological cases, by study of the anatomy and histology of the ear, by experiments on animals, and by using mechanical models. Replies are given to the various criticisms of the theories. Watt's, Borring's, and the resonance hypotheses are presented. Bibliography.—*M. B. Mitchell* (Yale).

4372. Hecht, S. **Vision: II. The nature of the photoreceptor process.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 216-272.—Similarities between the various sense organs are pointed out. Regardless of the stimulus affecting the receptor, nervous impulses which are identical are imparted. The effect produced by them depends upon the kind of tissue in which they end and the kind of ending. Adaptation, however, belongs to the peripheral receptor process, and is controlled by the stimulus. In the case of vision, the condition in the sensory cells depends upon the intensity of the light and the concentration of the decomposition products produced by it from the sensitive substance. This condition stabilizes the relation between the nervous system and the environment. Bibliography.—*M. B. Mitchell* (Yale).

4373. Hegner, C. *Bemerkungen zur Methodik der Sehprüfung.* (Remarks on the method of testing visual capacity.) *Schweiz. med. Woch.*, 1928, 58, 1077-1078.—As Loehner and C. von Hess have already established, the consideration of the tangential value $1'$ is not sufficient to give an unobjectionable test-object. Since the introduction of international visual tests has received no full recognition and application, one can consider as a valid standard only Landolt's signs, which have been scientifically found to be exact. As a visual test for recruits Pfüger's "Hooks" were used in the Swiss army. A comparison of the two methods on 100 recruits showed that with the official hook tests one obtained on the average a visual acuity of about 20% or more higher than with Landolt's rings. Consequently it would be a logical requirement to increase the test-distance for the hook tests from 5 to 6 meters to obtain agreement in results.—M. R. Lambercier (Geneva).

4374. Holsopple, J. Q. *Space and the non-auditory labyrinth.* In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 414-433.—There is a perception of space which cannot be explained in terms of sensory data without using the vestibule. In normal life vestibular experience seems dependent upon spatial factors, but it is not necessarily any more so than any other experience. The characteristics of the perceptions which follow vestibular stimulation are practically unknown. The stimulus for the receptor is an angular acceleration around any one of the bodily axes. The receptor mechanism consists of the vestibule and the semi-circular canals. Their stimulation results in changes in tonicity of antagonistic muscles, which shows itself especially in connection with nystagmus and past-pointing, but is general as shown by nausea and inability to balance oneself. Practice will modify the vestibular response. Some of the difficulties and possibilities in vestibular research are enumerated. Bibliography.—M. B. Mitchell (Yale).

4375. Johnson, H. M. Did Fechner measure "introspectional" sensations? *Psychol. Rev.*, 1929, 36, 257-284.—The author expounds and defends the five theses that: (1) Fechner's fundamental formula (the *Massformel* and its consequences) is not empirical but definitive; (2) the judgment of a just noticeable difference is not reached by direct comparison of two introspectional sensations, but by means of a census of classified responses, the classification and the enumeration being performed not only by the subject of the experiment but by the experimenter; (3) the Fechnerian sensation has important properties that are incongruous with those belonging to introspectional sensations; hence the identification of the two is illicit; (4) introspectional indifference does not guarantee the equality of magnitude of the so-called sensations whose magnitudes are defined by the Fechnerian formulas of measurement, for Fechnerian sensations of absolutely large and finite magnitudes exist at every instant, without their owner being conscious of their differences or even of their existence; (5) the contention of the behaviorist

that psychophysics is not a genuine science or a possible empirical science is not impaired by Fechner's treatment. Twenty references are given.—H. Helson (Bryn Mawr).

4376. Kellogg, W. N. *An experimental comparison of psychophysical methods.* *Arch. of Psychol.*, 1929, No. 106. Pp. 86.—This monograph reports the results of an empirical study of the relation between the method of average error and the method of constant stimuli (with no equal judgments allowed). The work was undertaken in two sense modalities. For vision, the differential brightness sensitivity was determined from an especially constructed Lummer-Brodhun photometer; in audition, tones produced by an audio-oscillator circuit of new design gave the intensive sensitivity, with pitch held constant at 1000 d.v. Each of the psychophysical methods was employed in each modality, and the five observers who served in the visual and auditory fields respectively furnished a total of 21,000 constant stimuli judgments and 2600 average error determinations. The methods were compared in terms of variable errors (for which the S.D.'s of the distributions of judgments were used) and constant errors. The principal findings are that the lower sensitivity measure is obtainable with the method of average error. The observer, on the average, performs more consistently from day to day, however, with the method of constant stimuli. The author therefore regards the latter method as preferable for studying Weber's law and also for the use of the testing psychologist. Constant error figures furthermore indicate that the method of constant stimuli permits in general more accurate objective measurements and hence should be better for physical sciences. Average error, on the other hand, is a more sensitive recorder of individual differences, and performance by this method is influenced to a greater extent by fluctuations in the observer's attitude and physiological condition. Equations worked out between variable errors obtained by each of the methods show that the relation existing between them is not absolute and therefore only approximate predictions can be made from one method to the other.—W. N. Kellogg (Columbia).

4377. Kiesow, F. *A forgotten experiment.* *J. Gen. Psychol.*, 1929, 2, 360-362.—The phenomenon which was first noticed by Purkinje may be obtained in the following manner. "One eye is closed and with the other the experimenter looks (without fixing any particular spot) at a surface of uniform color (a wall, the sky, a sheet of paper, etc.), and notices after a little time that there is a contest between the two fields of vision of which one is dark (closed eye) and the other light (open eye)." The author's results for this experiment indicate that the contest in the whole series of achromatic sensations is of a slow nature.—H. Cason (Rochester).

4378. Martin, L. C., & Richards, T. C. *The relations between field illumination and the optimal visual field for observational instruments.* *Trans. Opt. Soc. Great Britain*, 1928-29, 30, 22-33.—Describes experiments to determine the conditions governing the optimum size of visual field. It is found

that under certain conditions of vision with a telescope, when relatively dark objects must be observed in the center of a bright field, advantage can be obtained by reducing the size or brightness of the peripheral parts of the visual image. The advantage indicated by laboratory experiments of a statistical kind has been confirmed by quantitative field tests with binoculars possessing a variable field. On the other hand, the experiments have clearly confirmed the advantage of a large field under conditions of low illumination or when the object is brighter than the surrounding field. The results have a bearing on recent efforts greatly to enlarge the fields of view of binoculars, indicating that small fields are better under certain conditions.—*L. L. Sloan* (Johns Hopkins).

4379. Nafe, J. P. **The sense of feeling.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 392-413.—The quantitative theory of feeling states that the difference between pressure and pain is merely one of intensity. Intermediate intensities with a certain modification are experienced as warmth, while those with a different modification are experienced as cold. The qualitative theories state that warm, cold, pressure, and pain are separate qualities with separate sense organs. Their basis is laid on a general acceptance of Müller's law of the specific energy of nerves, the relation (found by histological studies) between sensitive areas in the skin and sensory receptors, and the possibility of eliminating some qualities without others by the use of drugs, sectioning nerves, and lesions in the spinal cord. A pain sensation requires a longer duration as well as increase in frequency of impulses to distinguish it from pressure. Localization is a learned process involving more than one group of receptors. Kinesesthetic sensibility makes it possible to learn the position of objects and the posture of the body without the aid of vision. It also makes it possible to learn to judge weights and resistances. The viscera are relatively insensitive, but may play an important part in affective experience. Pleasantness is localized in the upper part of the body as bright points, while unpleasantness is localized in the lower part of the viscera as dull pressure. Bibliography.—*M. B. Mitchell* (Yale).

4380. Nafe, J. P. **A quantitative theory of feeling.** *J. Gen. Psychol.*, 1929, 2, 199-211.—"The sense of feeling includes the psychological experience accompanying the activity of all the receptors of the body except those for the special senses of vision, audition, olfaction, and gustation, and possibly those of the non-acoustic labyrinths concerned with equilibrium, etc. Different feelings such as pressure, fear, pain, tickle, warmth, etc., are experienced, but no such experiences have been shown to be either 'simple' or 'qualities' in the sense that they are mediated by separate neural systems with specialized receptors and cortical areas."—*H. Cason* (Rochester).

4381. Parker, G. H., & Crozier, W. J. **The chemical senses.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press,

1929. Pp. 350-391.—Three chemoreceptors are stimulated by substances in solution. The receptors for smell are located in the nasal cavity, those for taste in the oral cavity, and those for the common chemical sense in the nerve terminals diffused throughout the moist mucous surfaces. A brief explanation is given of the anatomy of the various receptors and the more important experimental work that has been done upon them. Bibliography.—*M. B. Mitchell* (Yale).

4382. Poppen, J. R. **Aviation goggles: their effect on vision.** *U. S. Naval Med. Bull.*, 1928, 26, 572-578.—One hundred aviators were tested with and without goggles for visual acuity, depth perception, Maddox rod screen test at 6 meters and 33 centimeters, and prism divergence. Three types of goggles were included: plane glass lens, plain cylindrical lens, and meniscus lens. Practically no distortion of vision was produced by the goggles, but decentered lenses were found to be distinctly advantageous.—*C. M. Louttit* (Hawaii).

4383. Robinson, R. **The contrast between inference and perception.** *Phil. Rev.*, 1929, 38, 246-257.—The author follows the doctrines of Cook Wilson, that perception is direct knowledge, that knowledge is certain or infallible, that opinion is merely probable, and that science is not knowledge. Inference, as opposed to perception, is merely probable opinion.—*A. P. Brogan* (Texas).

4384. Spreng, M., & Wirz, E. **Zur Methodik der Sensibilitätsprüfung auf Wärme.** (Concerning the method of testing the sensitivity to warmth.) *Schweiz. Arch. f. Neur. u. Psychiat.*, 1928, 23, 101-115.—The following method was the result of experiments begun in 1925 on the sensitivity to warmth of dentine and of sound teeth. The methods employed by Goldscheider, von Frey, Blix, Donaldson, Alrutzy, Turekheim, and others have many disadvantages that the authors have tried to eliminate. The article gives in detail the numerous difficulties encountered in the perfecting of the apparatus which is, in principle, a combination of the Blix apparatus and a thermocautery. An insulated sleeve holds a thermometer in close contact with an interchangeable pointer. The pointer is heated by the passage of an electric current through a nickel spiral insulated from the thermometer. The apparatus is supplied by an alternating current which is taken from the lighting system and given the necessary voltage and amperage through the use of a small transformer. The voltage can be very accurately regulated by means of a parallel branched resistance on the primary circuit of the transformer. Due to this arrangement, all desired temperatures between the surrounding temperature and 180° C. can be obtained. A thermo-electric arrangement, serving as a control for the apparatus, showed that the error between the temperature of the external surface of the pointer and the temperature indicated by the thermometer is, at the maximum, from 2° to 3° C., varying according to the temperature. Different kinds of pointers were tested. The use of a continuous current would require very expensive apparatus. The experimental results obtained with this new

thermesthesiometer will be published at a latter date.—*M. R. Lambercier* (Geneva).

4385. **Troland, L. T.** Vision: I. Visual phenomena and their stimulus relations. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 169-215.—A description of visual phenomena is given from an introspective viewpoint and is followed by an explanation of the anatomy and physiology of the visual receptive organ. The correlations between the two are presented. This section consists of a summary of the experimental and some theoretical work on such topics as the psychophysics of color, monocular laws governing visual form, depth, the binocular determination of visual form, the visual perception of motion, and the relation between visual experience and the cerebral cortex. Figures, tables, and bibliography.—*M. B. Mitchell* (Yale).

4386. **Wever, E. G.** Beats and related phenomena resulting from the simultaneous sounding of two tones: I. *Psychol. Rev.*, 1929, 36, 402-418.—After a discussion of the early history of the mention of beats in the literature, it is pointed out that the nature of the beating experience requires that three stages in the beating phenomenon be distinguished: (1) noticeable oscillations of intensity; (2) pulsations of tone; (3) roughness without intermittence. There is considerable overlapping of these stages. The factors influencing the limits within which beats may be heard (beat thresholds) are: (1) the pitch-region from which the tones are taken; (2) intensities of these tones; (3) the criterion selected for judgment. Lack of adequate control of these factors accounts for the wide variation in values given for beat thresholds by various writers. The author's conclusions are based upon his own quantitative work, which showed that any considerable disparity of intensity between two tones will impair the perceptibility of the beats, while the beats will be best heard when the components are on the same level of intensity. There is, properly speaking, no lower limit for the perception of beats, except that imposed upon the observer's patience in long periods of observation, the author having heard one beat in as long a period as two minutes. The upper threshold for the perception of beats increases with tonal frequency. Evidence regarding the intertone is generally in agreement that the pitch of the intertone is where Helmholtz's formula places it at a maximum, whereas his deduction for the beat-minimum is doubtful. The critical interval at which the primaries as well as the intertone are perceptible and the critical point at which the intertone drops out are discussed.—*H. Helson* (Bryn Mawr).

[See also abstracts 4336, 4349, 4415.]

FEELING AND EMOTION

4387. [Anon.] The transfer of skill and the emotions. *Science*, 1929, 70, xii-xiii.—The transfer of skill is much less than has been supposed, and may even be negative, according to T. H. Pear of Manchester. Transfer is facilitated by an analytic attitude and by favorable emotional attachments to

the occupation in question.—*R. R. Willoughby* (Clark).

4388. **Bard, P.** Emotion: I. The neuro-humoral basis of emotional reactions. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 449-487.—An explanation is given of the functioning of the autonomic nerves involved in emotional behavior. The thoracolumbar or sympathetic nerves are active during such emergencies as strong emotions, pain, and asphyxia. They stimulate the secretion of adrenin, which increases the speed of blood clotting and glycogenolysis. The heart beat is accelerated, the rate of respiration is increased, and the spleen is contracted. The parasympathetic division of the autonomic system, including the cranial and sacral nerves, acts in opposition to the sympathetic system to conserve bodily activity. During strong emotional states such processes as digestion are inhibited. A study of decorticated dogs and cats shows that the cerebral cortex is not necessary for the somatic expression of rage, but that the latter is actually increased when the inhibitory influence of the higher level is removed. Clinical and pathological cases in human subjects show that the diencephalon, particularly the lower thalamus, is necessary for the expression of emotions, while the cerebral cortex inhibits their continual expression but releases them for conditioned stimuli. The theory of emotions of Cannon and Dana, based on diencephalic processes, fits the experimentally established facts much better than the James-Lange theory. Bibliography.—*M. B. Mitchell* (Yale).

4389. **Cannon, W. B.** Bodily changes in pain, hunger, fear and rage. (2d ed.) New York: Appleton, 1929. Pp. 404. \$3.00.—The present book takes account of the experimental material which has appeared since 1915 and in addition contains five new chapters in which the following topics are discussed: emotional increase of red blood corpuscles, emotional derangement of bodily functions, the physiological basis of thirst, a critical examination of the James-Lange theory, and emotion as a function of the thalamus. The persistent derangement of bodily functions in strong emotion is interpreted as due to the persistence of conditioned or unconditioned stimuli for the reactions. Thirst is a sensation referred to the mucous lining of the mouth and pharynx. This sensation is a signal of the bodily need for water and arises, in the case of true thirst, because the salivary glands lack the water necessary for their secretions. This theory of thirst is supported by the results of an analysis of the relevant experimental literature. In addition to the usual objections to the James-Lange theory, Cannon points out that the viscera are not only relatively insensitive but the visceral responses are too slow to be the basis for emotional feeling. The data of Head and Head and Holmes are utilized in elaborating the theory that "the peculiar quality of the emotion is added to simple sensation when the thalamic processes are aroused." This theory is then applied to the various facts of emotion, and is claimed to be adequate. "The cases of release of the thalamus from

cortical control on one side, with accompanying intensification of emotional tone on the same side, present an insurmountable obstacle to the James-Lange theory. Neither the thoracic nor the abdominal viscera can function by halves, the vasomotor center is a unity, and the patients certainly do not engage in right- or left-sided laughter and weeping. The impulses sent back from the disturbed peripheral organs, therefore, must be bilaterally equal. For explanation of the unsymmetrical feeling we are driven to the organ which is functioning unsymmetrically—i.e., the thalamus."—*W. S. Hunter* (Clark).

4390. Chappell, M. N. Blood pressure changes in emotion. *Arch. of Psychol.*, 1929, No. 105. Pp. 39. —The author has attempted to determine the cause of the blood pressure change in deception of the laboratory kind. In a preliminary investigation it was shown that the auscultatory method and the new mechanical device (Tycos indicating sphygmomanometer) are of equal accuracy. There is an entirely reliable difference between these and the palpation method. In the first experimental situation it was found that truth and deception could be differentiated with 87% accuracy and that by all means of treating the data the group differences were highly reliable. Group curves are presented, as are several individual curves. In the second experiment the same type of group curve was found under conditions where the subjects were not attempting deception but were made to believe that their intelligence was being measured. In the third experiment the same tests were used as in the above experiment but in this case the subject was not made to believe that his intelligence was being measured and he reported nothing of the work that he was given. All competition was eliminated as far as possible. The resulting curves showed no rise in pressure due to mental work. The rise obtained in the second experiment must have been due to excitement. In the fourth experiment the subjects assumed an attitude of truth or deception under conditions which were designed to give rise to little emotion. Again no rise in pressure was found. The important conclusions are that the consciousness of an attempt of deception does not influence blood pressure; that the rise in deception is due to the pressure of excitement when such a rise is found; that mental work causes no change of pressure over short periods; that there is no characteristic curve for blood pressure in deception; that the auscultatory and mechanical methods of taking pressure are desirable in this type of experiment.—*E. M. Achilles* (Columbia).

4391. Landis, C. Emotion: II. The expression of emotion. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 488-523.—A description of the expression of emotions is given, including the physiological changes of facial expression, visceral responses in changes of the constituency of the blood, blood pressure and blood volume, and heart and respiratory reactions. Changes in rate of metabolism and gastro-intestinal activity are also described. There are some innate expressions of emotion, but their

recognition is acquired. The rôle of the various parts of the nervous system is stated. The psychogalvanic reflex is governed by the autonomic nervous system, but may result from phenomena other than those known as emotional. The author concludes that future work should be done on the relation between learning and emotion, and on the relation between the physiology of the central and autonomic nervous system and emotion. Bibliography.—*M. B. Mitchell* (Yale).

4392. Raines, L. Emotion; a classified bibliography. *Bull. Bibliog.*, 1929, 13, 180-182.—This is Part II of the bibliography. (For Part I see III: 2965.) It covers the classification of numbers 102-195. The divisions are: feeling, affection, P-U; neural correlate of emotion; glandular and body changes; and adrenal.—*F. G. Thayer* (Clark).

4393. [Various.] The educability of the emotions. Boston Public Schools, 1927. No. 2. Pp. 51.—This article aims not only to encourage appreciation of emotional factors in the behavior of school children, but also to bring about an exchange of ideas and experiences among the public school teachers of Boston. The greater part of the pamphlet is given over to studies of 28 cases of emotional behavior of pupils. There is also a list of 10 questions designed to increase the teachers' insight into the child's emotional life. A brief list of selected readings is appended.—*H. S. Clapp* (Southboro, Mass.).

4394. [Various.] Training the emotions—controlling fear. Boston Public Schools, 1928. No. 2. Pp. 127.—A short discussion of acquired fears, following Watson, together with an outline for classroom training in emotional control and reports of experiments in various primary and secondary classes. Illustrated with approximately 125 brief cases supplied by pupils.—*G. L. Barclay* (Nebraska). [See also abstracts 4399, 4489, 4491, 4560, 4577, 4675.]

ATTENTION, MEMORY AND THOUGHT

4395. Bode, B. H. Conflicting psychologies of learning. New York: Heath, 1929. Pp. 305. \$2.00.—The central theme of this book is the nature of mind. It is written in the conviction that the question of mind is of central importance, both for teaching method and for our whole program of education. Theories of the nature of mind and their corresponding theories of learning are discussed in semi-historical order. These theories include: (1) mind as a substance or entity, which operates through its faculties; (2) the theory of consciousness or mental states; (3) physiological psychology and behaviorism; (4) the problem of purposive behavior. A "pragmatic" theory is presented in which "the core of the learning process is not habit, but intelligence" and in which the concept of purpose plays an important rôle. Educational implications are emphasized. Each chapter includes a list of references.—*L. W. Gellermann* (Clark).

4396. **Claremont, C. A.** The memory of memories. *Psyche*, 1929, 9, 44-52.—It is better to think of memory after the analogy of the "button" of a searchlight beam at times brighter than at others, than after such analogies, following Herbart, as that of something being brought up and then dropping back into unconsciousness. This searchlight beam is capable of searching within for a record of consciousness. However, even this searching leaves its trace; consequently we form a new image of the thing we first sought to remember. So secondary images are seen to be different from primary ones, and while we may recall only the secondary image, there is no destruction of the original.—*T. R. Garth* (Denver).

4397. **Holmes, S. J.** The freaks of creative fancy. *Psychol. Rev.*, 1929, 36, 446-449.—During the early part of a convalescence from illness (type of illness is not given) there was a time when the author could distinctly see the outlines of his "mental pictures" on the walls and ceiling of his room. The experiences were notable in that they appeared to be perfectly objective; the author could even attend to details in them, and they changed with no effort or control on his part. Images of whitish boulders, animals (unknown to zoologists), Indians, and well known public personalities were exteriorized. The author, although a zoologist, does not believe the methods of the behaviorist would suffice to deal with behavior of this sort. This power of making novel combinations of its materials is perhaps the most wonderful attribute of the mind; the neural activities underlying them are a mystery, since one cannot explain them as a result of conditioned reflexes or as a phase in the process of biological adjustment.—*H. Helson* (Bryn Mawr).

4398. **Hunter, W. S.** Learning: II. Experimental studies of learning. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 564-627.—A study of learning includes both acquisition and retention. The three usual methods of testing retention are by reinstatement, recognition, and saving in relearning. The various types of learning curves are reproduced from typical learning experiments. Probable causes for their peculiarities, such as plateaus, are suggested. After a consideration of the experiments which have claimed to show insight, the conclusion is drawn that there is only one kind of learning. The results of the experiments on whole versus part learning are too conflicting to justify a conclusion in favor of either. Within certain limits, the more distributed the practice periods, the less time is necessary for learning. Conflicting results concerning the effect of age on learning have been obtained when rats and human subjects were used. There seems to be a positive correlation between speed of learning and retention. Active recall, on the whole, has been more favorable to retention than passive recall. Retention has been found to depend upon the kind of activity engaged in immediately after learning. Verbal material is probably just as well retained as non-verbal if originally learned to the same degree and followed by comparable conditions. Not enough experimentation has been done on reminis-

cence to supply an adequate explanation. A brief review of a few of the experiments on transfer is given which indicates that the most plausible theory for its explanation is that of identical elements. Although Kincaid's experiments showed a tendency for the subjects to become more alike with practice, the author believes that future work will give different results. In conclusion a brief critical reference is made to the laws of learning. Bibliography.—*M. B. Mitchell* (Yale).

4399. **Jones, H. E.** Emotional factors in learning. *J. Gen. Psychol.*, 1929, 2, 263-272.—Psychogalvanic responses and immediate memory scores were taken for a group of 16 words from Jung's list. The words showed a 3 to 1 range in average P.G.R. magnitudes. A similar range ratio was found for the immediate memory values. On the basis of P.G.R., the words were separable into a "critical" and a relatively "non-critical" group, the rank order of the words being practically identical with that found by W. W. Smith in a similar experiment. Certain critical words, regarded as positively toned, yielded emotional and memory values reliably higher than those obtained for the non-critical words. Certain critical words, regarded as negatively toned, showed high emotional and low memory values. These results are closely similar to those found by Smith in a comparison of P.G.R. with delayed memory.—*H. Cason* (Rochester).

4400. **Lorimer, F.** The growth of reason. A study of the rôle of verbal activity in the growth of the structure of the human mind. New York: Harcourt, Brace, 1929. Pp. xii + 231. \$3.75.—The author summarizes his work as follows: "The cardinal thesis of the present study has been formulated in the statement that the processes and organization of communication are continuous with other physiological and social processes, and that the evolving structure of intellectual activity (including the forms discovered in logical analysis) is a function of the total growth of life both prior to and subsequent to the rise of verbal activity. This statement involves no denial of structures prior to the evolution of organisms which we classify as living; on the contrary, it assumes that the history of such organisms is at no point discontinuous with more extensive and conditioning structures, which in turn may be conceived as dependent upon their total contexts. . . . Mind has been defined as the most immediate context in which thoughts originate. Such immediate context of thinking is at first organismic, but its structure is conceived as continuous with all natural structure. Thus the structure of the world in which we live and about which we think, as reorganized in organic and social processes and especially in intellectual processes, constitutes the structure of mind. Thought as implicit tensional behavior and mind as its immediate context are prior to linguistic activity. But thought is reorganized and mind is reconstituted through the instrumentality of linguistic processes into human reason and logical structure." There are chapters on the growth of intelligence prior to verbal activity, the growth of verbal activity, symbolism and meaning, syntax

and abstraction, and the integration of symbolic processes. The two final chapters contain applications of the author's principles to problems in philosophical, logical, and social theory.—*E. A. Esper* (Washington).

4401. Oosterlee, P. *Over de phantasie in het kinderleven haar waarde en haar gevaren voor onderwijs en opvoeding*. (Fantasy in child life; its value and its dangers for education and learning.) Groningen: Noordhoff, 1925. Pp. 137. f 3.25.—After having pointed out the many discrepancies existing in psychological terminology with reference to the term *imagination*, and the still more important discrepancies among various scholars concerning the effects of imagination upon the inner life of the individual and upon humanity in general, the author describes briefly various theories regarding imagination. He deals with the differences between imagination and memory, imagination and hallucination, imagination and thinking. He then discusses the different kinds of imagination, the most important of which are the reproductive and the constructive or productive, the former composing an image out of elements existing in the mind and existing or having existed in reality, the latter making combinations without any objective example in reality. The antithesis between these two forms of imagination is, however, never clear-cut; probably imagination is never entirely productive nor entirely reproductive, but always a combination of the two. After mention has been made of other kinds of imagination (concrete and abstract, subjective and objective, etc.), attention is given to symbolic imagination, which the author considers of utmost importance. In the third chapter, the author tries to show that emotional and subconscious factors play an important part in mental activity, as does also the will. Attention should be paid to the natural development of all elements of inner life; the reaction against neglect of the imagination should never result in a plea for its despotic tyranny. The teaching of tales and of the Christian religion is necessary for the development of the imagination, inasmuch as the creative value of imagination is not understandable to anyone who does not admit the existence of the psychic condition which is called religion; in addition, such teaching gives necessary emotional values. The author points out the importance of the imagination for virtue, for learning and for practical life: for virtue, because without the power to live in one's mind the life of others, no real love, pity or sympathy is possible; for learning, because this same power plays an important part in the learning process; for practical life, because all progress is due to the idealism of those who struggle for certain conditions which at first exist only in their imagination. The dangers of imagination arise from overdevelopment or from wrong guidance. The dangers of an overdeveloped imagination are dishonesty, suspicion, day-dreaming. As an instance of wrong guidance the author mentions the distorted pictures of life in the child's mind resulting from sensational literature.—*R. van der Heide* (Radeliffe).

4402. Richardson, L. F. *Imagery, conation, and cerebral conductance*. *J. Gen. Psychol.*, 1929, 2, 324-352.—An attempt to give a mathematical description of the time changes in the intensity of imagery, including the refusals, sudden onsets, fadings, and recoveries, which come in response to trying to think with various intensities. Several of the changes observed in the intensity of the auditory image of words are described by the following formula:

$$M = V \frac{4S}{(S+1)^2}$$

$$k \frac{dS}{dt} = \frac{(SV^n - 1)}{(SaV^n + 1)} \frac{S}{(S+1)^2}$$

where t is time in seconds, V is intensity of trying to think, M is intensity of relevant imagery, both V and M being measured in units peculiar to the person; k , n , and a are "brain constants" independent of V , M , S , and t . The author acted as his own subject in the experiments.—*H. Cason* (Rochester).

4403. Wilkins, M. C. *The effect of changed material on ability to do formal syllogistic reasoning*. *Arch. of Psychol.*, 1929, No. 102. Pp. 83.—The problem was to determine to what extent ability to do formal syllogistic reasoning is affected by changing the material reasoned about. If ability to do formal syllogistic reasoning in familiar material is not identical with ability to do this sort of reasoning with other material, which of these abilities will have the closest relationship to general intelligence as measured by an intelligence test? 81 undergraduates of Columbia acted as subjects. The test material consisted of four parts: (1) syllogistic forms embodied in familiar material, (2) syllogistic forms in symbolic material, (3) syllogistic forms with very unfamiliar terms (scientific or nonsense words), and (4) situation (1) with the conclusions within the experience of the subject and their truth or falsity at variance with their validity as deduced from given premises. The conclusions are that formal syllogistic reasoning is much affected by a change in the material reasoned about. There is a marked correlation, though not a high one, between success on the syllogism test and success in the Thorndike Intelligence Examination. The most difficult fallacies are those of undistributed middle and conclusion drawn from two particular premises. The same fallacies that have special value for determining success on the syllogism test have value for determining success on the Thorndike Intelligence Examination. The fallacy of illicit conversion has a slightly greater relative value for the diagnosis of intelligence than for the diagnosis of ability on the syllogism test.—*E. M. Achilles* (Columbia).

4404. Winsor, A. L. *Inhibition and learning*. *Psychol. Rev.*, 1929, 36, 389-401.—Cases of negative learning in which increased stimulation results in a decreased response appears strange in the light of current theories of learning. By measuring the parotid secretion for successive periods under constant unreinforced stimulation the change from a positive to a negative response may be shown with

the human subject; it has been shown by Pavlov with the dog. The amount of saliva secreted when the subject was seated quietly without food was measured. In the next minute food was placed before him and a 300% increase in saliva was registered. The quantity obtained for successive minutes of continued stimulation thereafter without reinforcement (without eating) showed a progressive decrease. A state of inhibition sets in during which the food, no longer eaten when seen, loses its biological significance as a signaling agent, and the organism quickly adjusts to this new state of affairs. During the second control period all food was removed from sight for one minute, and when it was replaced in the next period the response was partially restored, a phenomenon Pavlov has named "dis-inhibition." In the case of inhibition the positive response or habit was not eliminated by discontinuing the stimulation or by substitution of another stimulus. Fatigue as an explanation is ruled out on several grounds. It was possible to elicit or extinguish the salivary response by the process above described. Conditioning by bell metronome was also introduced as a complicating factor in the dis-inhibition process. A criticism and restatement of the law of use and disuse are given, and reference is made to the Beta hypothesis of Dunlap.—*H. Helson* (Bryn Mawr).

[See also abstracts 4432, 4438, 4488.]

NERVOUS SYSTEM

4405. Bishop, G. H., & Gilson, A. S., Jr. Action potentials from skeletal muscle. *Amer. J. Physiol.*, 1929, 89, 135-151.—Action potentials of the frog's sartorius muscle, recorded by the oscillograph when only a few fibers are stimulated, are triphasic when the electrodes are exactly upon the active fibers and monophasic when off this pathway. This finding is interpreted as consistent with the core conductor-membrane theory of muscle and nerve.—*M. J. Zigler* (Wellesley).

4406. Cannon, W. B., Newton, H. F., Bright, E. M., Menkin, V., & Moore, R. M. Some aspects of the physiology of animals surviving complete exclusion of sympathetic nerve impulses. *Amer. J. Physiol.*, 1929, 89, 84-107.—Previous investigators found that animals died upon the removal of the superior cervical ganglia or the mesenteric nerves. The present study provides a method by which all of the ganglia of the sympathetic can be removed in several or in two stages. In the latter case the chain on one side is removed and that on the other side removed at a later operation. Cats, dogs and monkeys were used in the experiments. The animals survived in good health the total removal of the sympathetic chain. This operation did not prevent the female from performing the functions of reproduction and lactation. Unilateral sympathectomy in young kittens fails to produce any evident bilateral asymmetry in development when they have grown to full size. In order to disprove the alleged finding that chromophil tissue is essential to life, one adrenal was extirpated and the other demedullated in certain of these animals without fatal

consequences. Emotional excitement fails to produce erection of hairs, consistent increase in blood sugar, and polycythemia or marked rise of arterial blood pressure in animals after complete sympathectomy. These animals are very sensitive to cold and appear to have lost the mechanism by which heat is conserved. They lose heat more rapidly than the normal animal in a cold environment. It is suggested that the sympathetic seems to function in times of emergency as an aid in effecting an adequate adjustment of the internal organs for use by the mechanisms which respond to external agencies.—*M. J. Zigler* (Wellesley).

4407. Dugge, M. Erhöhter elektrischer Körperwiderstand ein Zeichen für Vagotonie bei Barometersturz oder Föhn. (Increased electrical bodily resistance a sign of vagotonia with falling barometer or storm.) *Schweiz. med. Woch.*, 1928, 58, 614-616.—In Davos experiments were made on 18 persons as to the atmospheric influence on the electrical conductivity of the human body. The technique is briefly described. It has been shown that with rapidly falling barometric pressure, but especially before and at the beginning of the south wind (that is, generally on the anterior side of the depression) the electrical resistance is usually comparatively large; with good stable weather, on the contrary, it is relatively low. Since Minor found that with cervical sympathetic stimulation the resistance was lower and with cervical sympathetic paralysis it was higher, it was concluded that the atmosphere, before the south wind and with the falling barometer, acts in the sense of a sympathetic paralysis, that is, by vagus stimulation, on human beings (especially those sensitive to the south wind). This conclusion seems all the more justified since on the one hand it has been shown that with the falling barometer and south wind the human body is strongly charged with electricity, and since on the other hand there are experimental observations according to which artificially electrically charged experimental subjects show certain signs of increased vagotonia. Also, other observations from the literature point in the same direction. With the complete quiescence of the vegetative reaction capacity no important deviation of the electrical resistance could be observed. Bibliography of 20 titles.—*M. R. Lambercier* (Geneva).

4408. Ferraro, A. The importance of the vegetative nervous system in mental disorders. *Psychiat. Quar.*, 1929, 3, 307-339.—The data regarding the anatomy and physiology of the vegetative nervous system is reviewed briefly. The work of the French school, which has contributed the results from a study of thousands of records devoted to an investigation of the important biologic component of mental disorders, is especially emphasized. A bibliography.—*E. T. Burr* (Vocational Adjustment Bureau).

4409. Forbes, A. The mechanism of reaction. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 128-168.—The development of the nervous system is traced from the protozoa to the vertebrates. The most important effectors are ciliated cells, muscle

cells, and glands. The structures of nerve and muscle cells are contrasted and their functions compared. The all-or-none response is found in both; that is, if the stimulus is sufficient to cause a response, its size depends on the condition of the tissue and not on the intensity of the stimulus. Both fatigue and metabolism have been found in nerve tissue, although quantitatively they are much less than in muscle tissue. Chemical energy is changed to mechanical energy during muscular contraction. A comparison of the functioning of the conducting axones of the peripheral nerves with that of the nerve centers is made, using the spinal reflex as an example. Sherrington's theory is criticized. Tonus is merely a form of muscular contraction. Integration of nervous activity does not necessitate vitalism. Bibliography.—*M. B. Mitchell* (Yale).

4410. Heinbecker, P. Effect of anoxemia, carbon dioxide and lactic acid on electrical phenomena of myelinated fibers of the peripheral nervous system. *Amer. J. Physiol.*, 1929, 89, 58-83.—In view of the fact that Erlanger, Gasser and Bishop found that nerve fiber groups differ in thresholds and conductive rates, this study was undertaken to determine the influence of decrease in oxygen or increase in lactic acid and carbon dioxide upon threshold and conduction rate. The sciatic nerves of green frogs and bull-frogs were used. A nerve chamber sufficiently large to accommodate nerve preparations of 10 to 12 cm. length and all stimulating and recording electrodes was used. Anoxemia was induced by blowing almost pure commercial hydrogen or nitrogen through the nerve chamber in a constant stream. Carbon dioxide was given in the same manner. Lactic acid in the concentration of 250 mgm. per 100 cc. of frog Ringer's solution was applied. The application of all of these substances tended, in general, to raise the threshold, to lengthen the refractory period, and to decrease conductivity and the amplitude of action potential. When oxygen was given during recovery, or when the preparation was washed in isotonic Ringer's solution, the opposite results occurred. The different fiber groups respond differently in respect to threshold, refractoriness and conductivity. The depression was most rapid in the smallest (delta) and slowest in the largest (alpha) fibers. Recovery is most rapid in the alpha fibers.—*M. J. Zigler* (Wellesley).

4411. Lapique, L. The chronaxic switching in the nervous system. *Science*, 1929, 70, 151-154.—The response of efferent neuro-muscular mechanisms to afferent impulses depends not upon the existence of a special anatomical pathway from the sensory to the motor neuron, but upon the existence of an efferent neuron tuned to the same time ratio or chronaxy as the afferent conductor. Stimulation of any point on the periphery of the body may elicit a response at any other point provided there is chronaxy of the neural elements. A series of experiments has shown that the chronaxy of the cortical centers is essentially variable. The mesencephalon has the power of modifying the chronaxies of peripheral motor nerves. Inhibition is to be regarded simply as the closing of certain pathways by

alteration of their time ratios.—*G. J. Rich* (Boston Psychopathic Hospital).

4412. McDougall, W. The bearing of Professor Pavlov's work on the problem of inhibition. *J. Gen. Psychol.*, 1929, 2, 231-262.—Hydraulic speculations on the activity of the central nervous system, in which the author asserts that his views on the "drainage" theory, which was advanced by William James and others, has not received the attention it deserves. He approves of the experimental results obtained by Pavlov in his study of the salivary activity of dogs only in so far as they harmonize with his assumptions in regard to the "drainage" theory, instinct, etc.—*H. Cason* (Rochester).

4413. Poe, D. L. Physiology of the vegetative centers. *U. S. Naval Med. Bull.*, 1928, 26, 868-884.—A review of the evidence regarding the functions of the regions surrounding the third ventricle, especially those concerned with the innervation of the smooth muscles of the eye; contractions of the bladder and uterus; regulation of body temperature; vasomotility and perspiration, tear, mucous and sebaceous secretions; water, carbohydrate and albumin metabolism; and the trophic influence on the skin and its underlying fat.—*C. M. Louttit* (Hawaii).

4414. Poppi, V. [On the myelinization of the principal systems of fibers in the human mesencephalon and the constitution of the myelin sheath.] *Riv. pat. nerv. e ment.*, 1929, 34, fasc. 2.—The author studied the myelinization of fiber bundles of the mesencephalic covering in the human fetus. The fibers of the locus niger, the paleo-peduncular bundle, and the stratum intermedium are myelinated, according to the author, from the eighth to the ninth month of intra-uterine life. The temporo-pontine fibers of the tegument mature, on the contrary, along with the fronto-pontine fibers in the second month of extra-uterine life. The author also believes, according to the laws of comparative anatomy, that the collateral tract of the Cajal peduncle is an analogue of its own peduncular bundle. He thinks that the compact zone of the locus niger is formed in the human fetus by two layers of cells, one dorsal and one ventral, a fact that is variable and not easily recognizable in the adult. In the course of these researches he also made some observations on the structure of the myelin sheath by means of which he confirmed the existence of the alveo-reticular stroma described by Besta, although he did not observe in the frozen sections the granules described by Besta as present in the myelin sheath, a fact that made the author doubt their existence.—*G. C. Ferrari* (Bologna).

4415. Swetlow, G. I. Pain—its relief by means of nerve block. *Psychiat. Quar.*, 1929, 3, 340-347.—The author presents the results obtained in severe unyielding pain by means of alcohol nerve block; the anatomical, physiological and pathological bases upon which each of eight different types of cases were treated are described. The alleviation of cardiac pain following a single injection of alcohol has usually lasted several months. Similar success in relieving pain in gastric crisis, laryngeal tuberculosis, pulmonary tuberculosis, neoplasm of the lung

and sciatica are reported.—E. T. Burr (Vocational Adjustment Bureau).

[See also abstract 4432.]

MOTOR PHENOMENA AND ACTION

4416. Bills, A. G. **Mental work.** *Psychol. Bull.*, 1929, 26, 499-526.—A review covering 94 titles, under the following headings and sub-headings: (1) Theoretical aspects. (2) Curves of work: individual variations, initial spurt, warming-up, general decrement, work curve equation. (3) Subjective and objective fatigue. (4) Physiological effects. (5) Transfer of fatigue. (6) Facilitation and inhibition: distractors, rhythms, motives and incentives, attitude. (7) Kind of work. (8) Speed vs. accuracy. (9) Individual differences. (10) Rest and recovery from work.—J. F. Dashiell (North Carolina).

4417. Bogoras, N. **Über die Schilddrüsenverpflanzung mittels Gefässnaht von der Basedow-kranken auf den myxödematösen Kretin.** (Endocrine transplantation by vascular anastomosis from Basedow patients to a myxedematous cretin.) *Zentbl. Chir.*, 1926, 53, 3155-3160.—The post-operative course was difficult, but at the end of two weeks improvement was evident; after six months the patient had increased 12 cm. in height, 4 kgm. in weight, and about four years in mentality. The age of the Basedow patient was 28 and that of the cretin 14.—(Adapted from *Biological Abstracts*).

4418. Eichkorn, G. C., & Skaggs, E. B. **Some studies in body sway.** *Michigan Acad. Sci., Arts & Letters*, 1928, 10, 369-379.—The "swaygraph" is a new type of apparatus devised by the authors to measure the amount of body sway. It consists essentially of an overhead-piece, a detachable platform, and a body-piece. The amount and direction of body sway is recorded on a smoked paper. In the present paper the authors report data obtained from forty subjects. Correlations for retests were as high as .51. There was large daily variability in individual subjects. Untrained subjects showed slight practice effects, which soon vanished with systematic practice. The maximum ability to control the amount of body sway was rapidly attained. Subjects with eyes open excelled those with eyes closed. There were no clear-cut sex differences. The data indicated that short persons sway more than tall ones. There was no correlation between the ability to hold the body steadily erect and the ability to control the steadiness of the hand-arm muscles. The subjects were evenly divided when attentive factors were considered, attention leading to lessened control of body sway in some and increased control of body sway in others. Kinesthetic cues seemed to be the most noticeable conscious content during the test. A supplementary report shows a correlation of $.44 \pm .09$ between results obtained with the swaygraph and the Miles ataxiometer. The authors believe the Miles instrument a better indicator of body sway than their own.—N. L. Munn (Pittsburgh).

4419. Fauley, G. B., & Ivy, A. C. **The effect of exclusion of pancreatic juice on gastric digestion.**

Amer. J. Physiol., 1929, 89, 428-437.—The pancreatic ducts of seven Pavlov dogs were ligated and the effects on digestion processes were noted. Immediately after the ligation, three dogs showed a decrease and four an increase in gastric secretion for several days. Following this initial period, most of the dogs showed hypersecretion for three weeks; this is attributed to an unexplained increase in the intestinal phase of gastric secretion. The emptying time of the stomach is decreased; this is explained as due to the presence of hunger and as showing that acidity of the duodenum has small influence as compared with hunger on the rate of emptying.—M. J. Zigler (Wellesley).

4420. McGeoch, J. A. **The acquisition of skill.** *Psychol. Bull.*, 1929, 26, 457-498.—A review of 107 titles under the following headings and sub-headings: (1) Learning—experimental: the learning curve; perceptual skill; factors in improvability; cues and methods; special motivation; differences in age, sex, race, etc.; special factors, such as distribution of practice, length of problem, muscular tension, etc.; transfer and interference. (2) Learning—theoretical: the nature of learning; principles such as contiguity, frequency, effect, etc.; refractory phase; elimination and fixation; neural function as an explanatory principle. (3) Retention studies are unfortunately few.—J. F. Dashiell (North Carolina).

4421. Schorer, G. **Über den Elektrizitätsgehalt der Luft und dessen Einfluss auf wetterempfindliche Menschen.** (On the electrical content of the atmosphere and its influence on people susceptible to atmospheric conditions.) *Schweiz. med. Woch.*, 1928, 58, 431-432.—A brief notice of the results of 500 measurements of atmospheric conductivity during the Föhn (south wind) in connection with certain disturbances of the well-being of a person very sensitive to the weather. The disturbances appear when the negative electrical content of the atmosphere predominates over the positive. This apparently results in making more difficult the exchange of gases in the alveolar space. This seems to be confirmed by the complaints of increased difficulties in breathing of persons sensitive to atmospheric conditions, and by Gockel's experiments.—M. R. Lambercier (Geneva).

4422. Voegtlin, C., & De Eds, F. **Electron equilibria in biological systems. I. A method for the continuous measurement of the electrical potential in living cells.** *U. S. Pub. Health Reports*, 1928, 43, 380-392.—A vacuum tube method is described which permits continuous observation of potential changes in a biological system without the withdrawal of current from the system. Preliminary experiments are reported which indicate that muscle contraction is accompanied by a decrease, and relaxation by an increase, in electrical potential. The potential changes are rhythmic, corresponding to rhythmic muscle contractions. There are diagrams of the apparatus, and six records are reproduced.—C. M. Louttit (Hawaii).

[See also abstracts 4339, 4398, 4432, 4483, 4491.]

PLANT AND ANIMAL BEHAVIOR

4423. Ashley-Montagu, F. M. The discovery of a new anthropoid ape in South America. *Scient. Mo.*, 1929, 29, 275-279.—Measurements and photographs of a unique monkey found near the Tarra River.—J. F. Dashiell (North Carolina).
4424. Christoleit, E. Muss der Vogel seinen Gesang lernen? (Must the bird learn its song?) *Beitr. Fortpflanzungsbiol. Vögel*, 1927, 3, 147-152.—(Courtesy *Biological Abstracts*).
4425. Crozier, W. J. The study of living organisms. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 45-127.—A review is given of the study of animal behavior by physical and mathematical methods. The study of tropisms has been very fruitful, both when studied singly and in combinations. Among the examples given are the study of stereotropic orientation in larvae, rats, and mice, and the combination of geotropic and phototropic orientation, which was found to be a function of time as well as of inclination of the plane and intensity of the light. Spontaneous activity is shown to be a function of temperature and of conditions in the digestive tract. The tonic immobility of animals has also been studied quantitatively. 47 figures. Bibliography.—M. B. Mitchell (Yale).
4426. Grime, G. [Ed.] Brehms Tierleben in einem Bande. Nach der neuesten (vierten) Auflage des Hauptwerkes frei bearbeitet. (Brehm's *Animal Life* in one volume. Freely edited on the basis of the latest (fourth) edition of the principal work.) Leipzig: Bibliographischen Institutes, 1929. Pp. xxxvi+863. M. 25.—The book attempts to give a fairly complete survey of the total animal realm. After a general characterization of each genus, a few important species are briefly pictured. In the table of contents the Latin names are placed beside the German ones. Besides the index of subjects an index of names is also given, since the most important investigators are everywhere mentioned. Following the plan of the "older Brehm" the book attempts to hold the interest in zoology of a large group by illustrating the life, and also as much as possible the mental life of the animals; but in every case the book now gives the new observations on animal behavior instead of the older, often mythical and sensational ones. Thus in relation to insects (this section was treated separately by Ludwig, in order to hasten publication) the familiar experiments of Frisch and A. Kuehn on the sense life and means of communication of bees have been included. In relation to ants, Escherich has been used. In the general part on mammals (p. 594 ff.) the question of animal intelligence is primarily discussed in detail. Further, the conclusive findings of W. Köhler about chimpanzees are included. The author assumes especially Wundt's differentiation of a purely "associative" animal life from the human mental life, in which the "apperceptive function" makes possible the formation of concepts and speech.—W. Wirth (Leipzig).
4427. Hoagland, H. Geotropic orientation of chicks. *J. Gen. Psychol.*, 1929, 2, 187-198.—The orientation of chicks on an inclined plane shows a linear relation between the angular extent of upward orientation on the plane and the slope of the plane. This relation can be accounted for by the fact that the posture of the chick while walking on the plane results in the stretching of certain leg muscles, and consequently excites proprioceptive impulses. The importance of the ear is emphasized as maintaining the posture necessary for the operation of a threshold difference in proprioceptive excitation in the muscles of the two legs. One table and three figures.—H. Cason (Rochester).
4428. Holmes, S. J. A note on tonic immobility. *J. Gen. Psychol.*, 1929, 2, 378.—The author claims that Hoagland did not state his position correctly in regard to the so-called death feint in *Rana*.—H. Cason (Rochester).
4429. Hovey, H. B. Associative hysteresis in marine flatworms. *Physiol. Zool.*, 1929, 2, 322-333.—Associative hysteresis was demonstrated in the flatworm *Leptoplana* by the conditioned reflex method. The creeping of the worms when illuminated was stopped by touching the anterior end; the number of touches necessary to stop the animal was recorded for 17 animals during 25 trials. The conditioned inhibition was lost after 10 hours, but could be reestablished readily. Controls eliminated the possibility that sensory adaptation, motor fatigue, or general injury determined the response. By this method light was used to establish a conditioned inhibition to a response that it itself elicited. Extirpation of the cephalic ganglia indicated that these organs were involved in the learning.—O. W. Richards (Clark).
4430. Hunter, W. S. The delayed reaction tested by the direct method: a correction. *Psychol. Bull.*, 1929, 26, 546-548.—That the direct method was used by Hunter in his 1917 study appears to have been overlooked in recent literature.—J. F. Dashiell (North Carolina).
4431. Husband, R. W. A note on maze learning with the time factor constant. *J. Gen. Psychol.*, 1929, 2, 366-369.—In an effort to eliminate the time variable and to reduce the large variations within the group, a metronome was used during the learning of a maze; twenty subjects were used. The results were compared with those of a control group, which did the same task without the metronome. The variability was not reduced, but a more uniform method of learning was brought about. The characteristics of learning were not altered. It is hoped that this technique contains some suggestions which may be followed up more completely and successfully later. 3 tables.—H. Cason (Rochester).
4432. Lashley, K. S. Learning: I. Nervous mechanisms in learning. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 524-563.—In mammals after birth there is little division of nervous tissue but neuroblasts continue to develop into neurons for some time, myelin sheaths form on the axons as they grow, the cell bodies increase in size, and chemical changes take place. Just how these changes account for the so-called maturation of instincts, delayed

instincts and development of intelligence is not definitely known. The author traces the development of the learning capacity briefly from the ameba to man. Judging from behavior, the synaptic type of behavior first appears in the echinoderms. The higher invertebrates learn just as quickly as the lower vertebrates so that the shift from a ventral to a dorsal position of the main nerve trunk is not very important for learning. In the vertebrate scale, the nervous development takes the form of an increase in size compared to the rest of the body, an increase in size of the cerebral cortex with its so-called association areas, and an increased speed of conduction. With rise in the phylogenetic scale there is little increase in the rate of learning simple habits but a gradual increase in the ability to learn more complex habits. In learning them the stimulus does not excite a definite series of cells but a certain ratio of the cells in a system. Thus the ability of the rat to run the maze after extirpation in the cortex or the ability of the man to regain his speech after injury to the cortex may depend more upon the size of the extirpation or injury than its location. The various laws of learning and the theories of the mechanism of learning are explained briefly and are shown to be inadequate. Bibliography.—*M. B. Mitchell* (Yale).

4433. **Lincoln, F. C.** *Bird banding in America. Annual Report of the Smithsonian Institution for 1927.* 1928. Pp. 331-354.—Bird banding has proved a valuable method of studying migration and life histories of a number of species. Beginning in 1902, this work was carried on by private individuals and agencies until 1920, when the U. S. Biological Survey assumed control. The results secured have been summarized in this paper from the point of view of migration for seventeen forms. The life history results are summarized for seven forms. A bibliography of 24 titles and nine plates complete the article.—*C. M. Louttit* (Hawaii).

4434. **Snodgrass, R. E.** *The mind of an insect. Annual Report of the Smithsonian Institution for 1927.* 1928. Pp. 387-416.—From the standpoint of consciousness as "awareness" the author deduces a working hypothesis: "The fact of consciousness we can not escape; that it is an actual determining factor in human action seems equally certain; that it is a useful property of other animals is then but a logical inference." The discussion which follows deals with insectan neural anatomy and the tropic, instinctive and intelligent behavior of insects. The conclusion is drawn "that the more highly organized hymenopteran insects possess memory and the intelligence at least of discrimination between sensory impressions not encountered before," and it is pointed out that investigations of insect mentality have dealt almost entirely with the Hymenoptera.—*C. M. Louttit* (Hawaii).

4435. **Thoms, C. S.** *Why do birds come back? Bird-Lore*, 1927, 29, 339.—Problem of the return of *Colymbus nigricollis californicus*, *Phalacrocorax auritus*, and *Calamospiza melanocorys* to previously unoccupied South Dakota localities.—*J. T. Nichols* (Courtesy *Biological Abstracts*).

[See also abstracts 4398, 4405, 4406, 4412.]

EVOLUTION AND HEREDITY

4436. **Clark, A. H.** *Dead versus living men. Scient. Mo.*, 1929, 29, 255-264.—Man is structurally closely related to the apes, but emphasis should also be placed upon his distance from them in mental capacities.—*J. F. Dashiell* (North Carolina).

4437. **Conger, G. P.** *New views of evolution.* New York: Macmillan, 1929. Pp. 235. \$2.50.—The author of this detailed study of evolution considers the mind as the nervous system at work. Important factors in nervous development are (1) conduction, which depends upon metabolic gradients; (2) co-ordination; (3) the reflex arc; (4) the tendency toward concentration in central structures; (5) synaptic connections and barriers which are involved in learning and inhibition; (6) the reservoir action of the central nervous system, which causes the storing up of implicit responses necessary for association and memory; (7) distance receptors in the head, which allow for preparatory adjustments, the rudiments of purpose, and for the possibility of conflicting end-reactions leading to volition; (8) conditioned reflexes, which are involved in the development of language and thinking; (9) reactions initiated by one individual and completed by others; (10) the development of ideation through further conditioning of implicit responses; (11) the development of sentiments and values from end-reaction complexes; (12) the totality of experience of an individual called self or personality. In the discussion of social evolution the author states that the biological or social structures such as families, tribes, etc., indicate integration and differentiation interpretable by evolution. More complex society is a superorganism; this superorganism is not purely biological but is dependent on the agency of mind. It may be said that starting with the blind physical processes there is a gradual working out of those more intricate and subtle structures called mind in society—the structures which are personal, social, and ideal.—*E. B. Heim* (Price, Utah).

4438. **Crow, W. B.** *Heredity and memory. Psyche*, 1929, 9, 53-60.—While it has been pointed out that memory and the repetition found in heredity are different, there is to be found here some analogy. It must be evident that this very analogy has a meaning that science must recognize. Instincts and wishes may be regarded as the tendency of the organism to pass from one state of development to another.—*T. R. Garth* (Denver).

4439. **Leven, —.** *Genealogische Untersuchung über die Vererbung der geistigen Begabung mit besonderer Berücksichtigung der verschiedenen Rolle des Geschlechts.* (Genealogical study of the inheritance of mental ability with special reference to the different rôles of sex.) *Volsaufartung, Erbkunde, Eheberatung*, 1929, 4, 75-112.—*A. Römer* (Leipzig).

4440. **Loewenthal, J.** *Zur Familiengeschichte des Hauses Bourbon.* (The family history of the house of Bourbon.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, 16, 235-242.—The taint of schizophrenia introduced into the house of Bourbon by Johanna of

Spain is traced down through the succeeding generations. The traits handed down by Jeanne d'Albret and Ludwig XII are also of significance in the family history.—*H. S. Clapp* (Southboro, Mass.).

4441. **Morgan, T. H.** *The mechanism and laws of heredity.* In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 1-44.—The historical evidence for and against the inheritance of acquired somatic characteristics is presented. The Mendelian laws and the chromosome theory are explained and illustrated. Their application to man is shown by examples of the inheritance of physical irregularities and similarities in twins. Galton's biometrical methods are criticized. The rôle of inheritance and environment is still an open question, which may be studied by controlling the conditions influencing identical twins. Bibliography.—*M. B. Mitchell* (Yale).

4442. **Rabaud, E.** *Différenciation et fonctionnement de l'organisme.* (Differentiation and functioning of the organism.) *Rev. phil.*, 1929, 107, 339-362.—The author contends against the hypothesis that a particular structure within the organism has an ultimate utilitarian value. Morphology does not necessarily imply function. An animal may have a structure (e.g., tail) that may or may not function. Its non-functioning does not signify a representative or vestigial character. The formation of organs is not brought about because of ulterior functioning, but rather because of a constitutional state. Every organ, no matter how important to the organism, may or may not be usable.—*T. M. Abel* (Sarah Lawrence).

4443. **Schmucker, S. C.** *Heredity and parent-hood.* New York: Macmillan, 1929. Pp. x + 322. \$2.50.—The author hopes not only to show those untrained in biology the exact evidence on which our knowledge of eugenics is based, but also to help in establishing a favorable public opinion toward birth control and other measures necessary in helping nature lift human life to higher levels. An historical and scientific survey of the outstanding studies in heredity is followed by an account of reproduction in the plant and animal series, and a treatment of the biological, psychological and sociological aspects of human relations.—*L. M. Hatfield* (Illinois Woman's College).

4444. **Törnell, G.** *Betänkande med förslag till steriliseringslag.* (Considerations with reference to a sterilization law.) *Svenska läkart.*, 1929, 34, 977-981.—On the 30th of December, 1927, a committee of experts was appointed by the Swedish Cabinet and the Ministry of Medicine to consider the matter of the sterilization of certain classes of feeble-minded, insane, epileptic and habitual criminals. On April 30th, 1929, the committee handed down its report and resolutions for a law to the Swedish Riksdag. In general it was their opinion that the sterilization of the feeble-minded was of greatest moment, of less importance in the case of the other classes. Only in the case where the defect or disease could reasonably be believed to be of heredity origin did the committee recommend sterilization. Castration as a method was unanimously

condemned on account of its bad physiological effects on the patient. Vasatomy, vasectomy, tuberotomy or tuberectomy were suggested as least harmful. The committee disapproved of castration as a punishment for crime but raised the question as to its desirability in cases of certain types of sexual crimes, as much for the protection of the offender as for the community. The proposal of the committee further provides for placing the matter of administration of such a law in the hands of the Ministry of Medicine. The operation is to be performed by a licensed physician. Physicians or others who may have knowledge of such operations are required to maintain the strictest secrecy under penalty of heavy fine. Finally, the report suggests that the whole matter of sterilization be purely optional and not compulsory.—*C. T. Pihlblad* (Wittenberg).

SPECIAL MENTAL CONDITIONS

4445. [Anon.] *Officers and Council for 1929. List of members and associates.* *Proc. Soc. Psych. Res.*, 1929, 38, 517-553.—*W. S. Taylor* (Smith).

4446. [Anon.] *Index to Volume 38 of the Proceedings of the Society for Psychical Research.* *Proc. Soc. Psych. Res.*, 1929, 38, 555-560.—*W. S. Taylor* (Smith).

4447. **Behrend, G.** *Attaining your desires by letting your subconscious mind work for you.* Holyoke, Mass.: Elizabeth Towne Co., 1929. Pp. 155. \$1.60.—This book presents the Mental Science System of Judge Troward, as taught to his only personal pupil, the author.—*J. C. Spence* (Clark).

4448. **Besterman, T.** *Report of a four months' tour of psychical investigation.* *Proc. Soc. Psych. Res.*, 1929, 38, 409-480.—Studies of Kahl-Toukholka (Paris), Briffaut (Paris), Schneider (Munich), Silbert (Graz), Rondon-Veri (Graz), Molnar and Lajos Papp (Budapest), Z. Papp (Budapest), Ignáth (Budapest), Karlik (Berlin), Johanson (Berlin), Kahn (Berlin), Forthuny (Paris), Daumal (Paris), and the dog Zou (Paris). Besterman thinks that some of the phenomena manifested by Forthuny, and some of those by Kahl-Toukholka, "were genuinely supernormal." Even for the latter medium, however, he remarks that "a clairvoyant who exploits her faculties commercially is bound to take the line of least resistance"—she "helps" herself if her sitters give her the opportunity by carelessness or indiscretion." The "calculating" dog, "Zou," is found only to recognize simple signals, "a feat not beyond the average capacity of a dog."—*W. S. Taylor* (Smith).

4449. **Böhm, J.** *Deutungsversuche aus parapsychischen Selbsterlebnissen.* (Attempted interpretations from personal parapsychic experiences.) *Zsch. f. Parapsychol.*, 1929, 4, 390-395.—The author sharply differentiates two mental sets in regard to the appearance of ideas and feelings in the conscious realm. In intuition, the attention is actively concentrated on a specific question, while in what the author calls *Natursichtigkeit* the inner field of regard is expanded and gives us an insight into other

people's mental content. Both mental sets are preceded by a foreboding feeling. This appears especially frequently as an introduction to personal parapsychic experiences after severe mental shocks, after long periods of sorrow, worry, etc. In exceptional parapsychic conditions the formative and active conditions are an intermediary stage between a dream state and waking experience. Thus the forms observed in a trance can be recorded, as though in a dream, by a photographic camera. It is thus a question of an intermediary form of biological experience. The author regards psychophysical mediumism in any given case as an expression of perverted, suppressed or inhibited, usually sexual psychic energy in different channels. In psychic empathy, that is, in the parapsychic phenomenon, he sees on the other hand the expression of a normal capacity which is present—at least in a latent form—in everyone.—O. Seeling (Berlin).

4450. Brown, W. Mental analysis. *Scientia*, 1929, 49, 241-250.—The author suggests calling the method of Freud "deep analysis" to distinguish it from the body of doctrine called "psychoanalysis." Treatment by this method achieves certain beneficial results, but does not interpret them. This method involves reliving the past, increasing self-knowledge, the transference of early attitudes from original reference to the analyst; it is characterized by high suggestibility. A plea is made for independent thought between treatments. Psychoanalysis should achieve a psycho-synthesis, and should cause highly emotional values to lose their disintegrating power.—R. G. Sherwood (Redmond, Washington).

4451. Darrow, C. W. Psychological effects of drugs. *Psychol. Bull.*, 1929, 26, 527-545.—154 titles reviewed, including studies on alcohol, nicotine, caffeine and allied drugs, morphine and other opium derivatives, cocaine, hashish, mescal, santonine, various anesthetics, carbon monoxide, oxygen and carbon dioxide, and the acid-base relationship.—J. F. Dashiell (North Carolina).

4452. Dukes, C. The inferiority of organs. *Psyche*, 1929, 9, 58-68.—The purpose of the paper is to direct attention to the effect which a physical defect may have on both mental and physical growth. Congenital organic inferiority in any respect is a weak spot and consequently a sickness-producing agency. These weaknesses run often in families. Weakness leads to an effort at compensation which is overdone, or sometimes the inferiority is disguised; in either case much energy is expended. In fact, the inferiority becomes the source of a directive force in personality. It may result in exaggerated striving and consequently bring about a pathological condition. At least it produces a feeling of inadequacy. However, disregarding extreme cases of congenital deficiency, the accomplishment of ordinary individuals depends not so much on native endowment as it does upon attitude toward the tasks of one's life.—T. R. Garth (Denver).

4453. Fisher, R. A. The statistical method in psychical research. *Proc. Soc. Psych. Res.*, 1929, 39, 189-192.—A sufficiently sensitive method of scoring is urged.—W. S. Taylor (Smith).

4454. Genil-Perrin, —. Les attitudes mentales vicieuses—le "Bovarysme." (Vicious mental attitudes—Bovaryism.) *Prophyl. Ment.*, 1929, 6, 35-37.—The case of Emma Rouault is described as illustrating "bovaryism," which is defined as the tendency to imagine oneself and one's surroundings as being other than they are to such an extent that normal life becomes impossible. The result in such cases is frequently suicide; a pre-disposing cause is said to be a "paranoiac constitution." The importance of the practice of mental hygiene in such cases is emphasized.—M. B. Jensen (Michigan Central State Teachers College).

4455. Jephson, I. A reply to M. Sudre's article, "An Experiment in Card Guessing." *Proc. Soc. Psych. Res.*, 1929, 39, 185-189.—The logic of scoring is at issue.—W. S. Taylor (Smith).

4456. Lodge, O. On the asserted difficulty of the spiritualistic hypothesis from a scientific point of view. *Proc. Soc. Psych. Res.*, 1929, 38, 481-516.—Whitehead is quoted in support of Lodge's own doctrine of "the primary reality of mind."—W. S. Taylor (Smith).

4457. Meili, R. Hasard et psycho-diagnostic. (Chance and psychological diagnosis.) *Arch. de psychol.*, 1928, 21, 198-207.—The author wished to demonstrate experimentally how certain methods more or less scientific can give apparently good results. Terms sufficiently vague, a certain intuition on the part of the examiner, a suggestibility of the subject and lastly chance can actually contribute to satisfy a large number of persons for whom a diagnosis is made. The author proceeded as follows: he gave according to chance (or better following Gauss's law) degrees (from 1 to 5) of judgment to 68 different aptitudes chosen from the list of qualities tested by Bissky's method of mental diagnosis (electrodiagnosis). The 50 lists thus made were submitted, likewise according to chance, to as many persons; each list represented a pretended "graphological" picture. The author then asked the persons to indicate by a figure the difference between their own rating and the graphological rating. The results of the 37 lists collected have given a coincidence (agreement of persons with more than 50% of the ratings) in more than 50% of the cases and with a mean variation of less than one degree (in 5). The agreement between the two kinds of rating is more than double that expected according to theoretical probability. These results show that in the face of a diagnosis most subjects permit themselves to suggest abilities or defects that they do not have, and particularly when the question is one of character traits or intellectual aptitudes. A comparison with experiments made by Shulte with Bissky's method proves the invalidity of diagnoses made by the latter method. The conclusions of the author are: that a rational method of psychological diagnosis ought above all to show the characteristic traits of a person and give an agreement of much more than 50%. However, a control based on ratings of the subjects is not sufficient, because diagnoses made by chance satisfy in a larger measure if

certain rules are taken into account.—*M. R. Lambertier* (Geneva).

4458. **Saltmarsh, H. F.** Report on the investigation of some sittings with Mrs. Warren Elliott. *Proc. Soc. Psych. Res.*, 1929, 39, 47-184.—In this medium the usual trance condition, with "controls," obtains. The author describes the method used for grading "the relative quality of the evidence," scoring and experiments which "have not yielded an unequivocal result"; he discusses the conditions, data, and theories. He finds it "a plausible hypothesis that the substratum of the trance material, the matrix in which we occasionally find embedded veridical communications, is a sequence of internally generated hallucinations analogous to hypnagogic visions." Reminiscences of other sittings also form "a considerable part of the non-veridical matter." For "the supernormal knowledge" shown by the medium, telepathy of pure meanings "is probably responsible." "A suggestion for a technique to be employed in future cases is appended."—*W. S. Taylor* (Smith).

4459. **Seifert, F.** Charakterologie. (Characterology.) München: Oldenbourg, 1929. Pp. 65. M. 3.10.—*W. S. Hunter* (Clark).

4460. **Steyerthal, A.** Pathologie des Unbewussten. (The pathology of the unconscious.) Stuttgart: Enke, 1929. Pp. 47. M. 3.80.—The concept of the "unconscious" is used today in many different contexts. To philosophers it means the only world-creating and world-maintaining principle. To psychologists it means a lower mental stratum, that lies below the conscious region. It has also been adopted in medicine on account of Freud's theory; yet his assertions cannot stand any detailed criticism. But a pathology of the unconscious is possible, because many people suffer psychically and do not know it themselves. They are aware of an infinite number of complaints and run from one physician to the other looking for relief. The basis of their suffering is found either not at all or too late, for they either do not know themselves where the painful trouble comes from, or they do not want to know because the thought of it is painful. Here a genuine mental hygienist finds a broad field. He must understand how to enter into the spiritual mechanism of the patient and to throw into proper light that of which he is unconscious. For this reason, the pathology of the unconscious is a field almost untouched, but for that reason all the more rich in reward.—*A. Steyerthal* (Bad Kleinen).

4461. **Steyerthal, A.** Krisis der Psychoanalyse. (Crisis in psychoanalysis.) *Psychiat.-neur. Woch.*, 1929, 31, 297-301.—*A. Römer* (Leipzig).

4462. **Walker, N.** The Tony Burman case. *Proc. Soc. Psych. Res.*, 1929, 39, 1-46.—"Tony," who died in 1926, "is the communicator" of "a number of true statements" which "cannot have been derived from the sitter's subconscious mind."—*W. S. Taylor* (Smith).

4463. **Watt, H. J.** The common sense of dreams. Worcester, Mass.: Clark Univ. Press, 1929. Pp. xviii + 212. \$3.00.—"This book . . . offers a

simple scheme for the interpretation of dreams and other psychoanalytical processes. . . . It shows that dreams are related to the preceding work of the waking mind in a generally simple way and it maintains that no new psychology at all is required to bring the fruits of psychoanalysis under the scope of the old theory of association, . . . if only we extend the accepted data of the mind to include not only sensations and ideas but also attitudes and urges." "What we are primarily interested in is not how we dream in specific dynamic detail but what we dream and, thereafter, why we dream." The dream may be looked upon as the solution of some reluctance. We may preface the dream with the words: compared with some previous scheme of ideas, it would be acceptable if things were as in the dream. The cryptic nature of dreams disappears when we view them as the solution of a conflict or the circumvention of reluctance. A solution is by its own nature different from that which is the ground of conflict—it is a something else that would raise no conflict. It is this fact, supported by others, that is responsible for the theory of a dream-mechanism, surely superfluous, of displacement. If we go on the assumption that the "censor" is quite pleased for the moment with the proposal in the dream, and that it all hangs together as a scheme of events, we shall have some guide to our interpretations, though not a perfect one. Various theories are discussed and examples and exercises in interpretation given. At the end of the work there is a biographical sketch and a bibliography of Watt's publications by Shepherd Dawson.—*G. L. Barclay* (Nebraska).

4464. **Wewel, A.** Konnersreuth in China. Die begnadigte Jungfrau Rosa Tschang in Beiyenfu. (Konnersreuth in China. The blessed virgin Rosa Tschang in Beiyenfu.) *Um Seelen*, 1929, 1, 207-208.—*A. Römer* (Leipzig).

[See also abstracts 4508, 4563, 4615.]

NERVOUS AND MENTAL DISORDERS

4465. [Anon.] Psychotherapeutic clinics. *Psyche*, 1929, 9, 82-84.—No single disease, as cancer or consumption, causes as much human suffering as those troubles called "nervous." This great field for philanthropic study and effort is practically untouched. Provision is made for total invalidism, nervous, and mental breakdown, but only a few institutions, such as psychotherapeutic clinics, are established for preventing these breakdowns.—*T. R. Garth* (Denver).

4466. [Anon.] Psychasthenia. *U. S. Naval Med. Bull.*, 1928, 26, 156-158.—A letter, with comments, written by a psychoneurotic. It is an excellent example of the mental processes of a man developing psychasthenia, or in the early stages of a mental breakdown.—*C. M. Louttit* (Hawaii).

4467. **Arndts, F.** Unfreiwilliger Tod durch Erhängen als Folge sexueller Verirrung. (Involuntary death through hanging as a consequence of sexual irregularity.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, 16, 274-278.—A description of the manner in

which a sex pervert was accustomed to masquerade in an outfit emphasizing the female form in order to practice onanism. Inside the costume he had fastened a board with 80-90 nails which pierced his flesh. The room in which he met involuntary death by hanging is described in detail.—*H. S. Clapp* (Southboro, Mass.).

4468. *Beuter, —. Das manisch-depressive Irresein unter dem Gesichtspunkt der Seelsorge.* (Manic-depressive insanity from the point of view of pastoral care.) *Krankendienst*, 1929, 10, 141-147.—*A. Römer* (Leipzig).

4469. *Bosch, G., & Gatti, E. M. Algunos conceptos e ideas personales sobre la demencia precoz.* (Some personal concepts and ideas concerning dementia praecox.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 48-52.—The authors review critically the various concepts concerning the cause and the treatment of dementia praecox. Their observations in the Rosario clinic lead them to the following conclusions: (1) There is a period in the development of schizophrenia when it can be cured; (2) in the prodromic states of schizophrenia there is no dementia; (3) schizophrenia or dementia praecox is not a true dementia; (4) tonsils and appendices may serve as foci of infection where a toxic condition persists; (5) underdevelopment of the sexual apparatus and glands is often noted in cases of schizophrenia.—*J. W. Nagge* (Chicago).

4470. *Branham, V. C. An inventory of mental clinic facilities of New York State exclusive of New York City.* *Psychiat. Quar.*, 1929, 3, 426-439.—The New York State Committee on Mental Hygiene felt that such an inventory as this might easily become the basis of a program of prevention for the entire state. The data were obtained mainly through questionnaires which were circulated among the clinic directors throughout the state. In some instances representatives of the committee made personal visits to get additional information. The inventory gives the geographical distribution of these clinics, the types of patients examined, the auspices under which the clinics are conducted, the clinic personnel and various other facts. Certain marked inadequacies found to exist in all types of clinics are noted. Statistical data on mental clinic activities in New York State for the year 1928 are presented in a series of tables.—*E. T. Burr* (Vocational Adjustment Bureau).

4471. *Brun, R. Die Neurosenfrage in der ärztlichen Praxis.* (The question of neurosis in medical practice.) *Schweiz. med. Woch.*, 1928, 58, 238-242.—In this lecture the author makes the following differentiations in the etiology of neurosis: pure neuroses (in Freud's sense) and psychoneuroses (in the narrower sense). The actual neuroses have their etiology in actual effective physiological defects. Chief forms: (1) the so-called genuine neurasthenia, with auto-intoxication of the vegetative nervous system; (2) the anxiety neuroses with psychic, groundless fears, the damming up of the libido sexualis and severe sympathetic attacks (obviously through a disturbance in sexual hormone-assimilation). Psychoneuroses have their etiology in pri-

mary affective disturbances on the basis of an unconscious conflict of instincts which has its roots deep in the whole mental past of the individual. They can be divided into three main forms: (1) hysteria with disturbances of cerebro-spinal innervation; (2) phobias; (3) compulsion neuroses. There follows a second chapter on differential diagnosis and a third on therapeutic lacks, in which the author takes the opportunity to differentiate between commotion neuroses and post-traumatic psychoneuroses.—*M. R. Lambercier* (Geneva).

4472. *Bumke, O. Die Grenze der geistigen Gesundheit.* (The boundaries of mental health.) München: Hueber, 1929. Pp. 18. M. 0.80.—*W. S. Hunter* (Clark).

4473. *Buscaino, V. M. [Hallucinatory catatonic syndromes, similar to parkinsonism, caused by the action of amines.] Riv. pat. nerv. e ment.*, 1929, 34, fasc. 1.—The author deals with experimental researches which have been recently made by several authors on mescaline and bulbocapnine. The former causes perceptual derangements, e.g., color hallucinations. Bulbocapnine causes catatonic and amnesic syndromes both in animals and in man. The author shows that the chemical nature of these substances causes them to enter the aminic group. These experimental data confirm the author's opinion concerning dementia praecox and postencephalitic syndromes, which he considers as aminic toxicoses.—*G. C. Ferrari* (Bologna).

4474. *Buscaino, V. M. [Histoneuropathological and encephalographical researches on the cerebrospinal fluid in dementia praecox cases, 1926-28. With an appendix on the zones of disintegration by clumping.] Riv. pat. nerv. e ment.*, 1929, 34, fasc. 2.—The article is a synthetic, critical review of researches made on dementia praecox cases during three years, 1926-1928. The most recent encephalographical researches on dementia praecox have emphasized external hydrocephalus and atrophy of the frontal lobes, alterations acquired during the course of the disease, since these conditions are hardly noticeable during the early stages. The recent researches on the cerebrospinal fluid in dementia praecox cases have shown especially variations in the protein constituents and the corpuscular elements which, according to the author, ought to be further studied because of this fact. Other histopathological researches on the disease confirm the fact that from its beginning it is accompanied by anatomical and histochemical lesions of the nervous tissue and that the question is thus one of the organic form found in the beginning stages. At the basis of this condition are found variable alterations of the meninges, of the vessels, the glia, especially of the nerve cells (vascular degeneration, sclerosis, etc.), and of the nerve fibers (the zones of disintegration by clumping). These lesions are very irregularly distributed over the cortex and even over the extra-cortical zones (basal ganglion, mesencephalon, pons, medulla, etc.). The biological process at the basis of these alterations is a degenerative type having an origin which is exogenetic—more precisely, toxic, due to basic organic substances of an aminic type (Buscaino).

According to the author, these results are in contrast to the constitutionalist tendency of Kretschmer and his school. The author deals particularly with recent researches on the zones of disintegration by clumping and finds that they definitely confirm the pathological significance of these zones in the sense which he has earlier indicated.—G. C. Ferrari (Bologna).

4475. Ciampi, L. La organizacion de la enseñanza psiquiátrica en la facultad de médicas de Rosario. (The organization in the teaching of psychiatry in the medical faculty of Rosario.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 5-23.—What was formerly the psychiatric clinic of Rosario has recently become the Institute of Psychiatry. The institute integrates what were formerly the division of psychiatry, the department of child neuropathology, the school for retarded children, the hospital for the insane, and the division of experimental psychology, with all of their dependencies. The importance of an adequate understanding of psychology for the psychiatrist is stressed. The University of Tübingen was the first to appreciate the necessity of a practical course of medical psychology as an auxiliary to psychiatric training.—J. W. Nagge (Chicago).

4476. Ciampi, L. Relacion sobre el funcionamiento del Hospital de Alienados y sus dependencias durante el año 1928, elevado al señor Delgado Interventor de la Facultad de Ciencias Médicas, Dr. H. Gonzalez. (An account of the functioning of the Mental Hospital and its divisions during the year 1928; submitted to Sr. Delgado through the Dean of the Faculty of Medical Sciences, Dr. H. Gonzalez.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 53-59.—J. W. Nagge (Chicago).

4477. Cid, J. M. Agnesia simétrica laminar de la granulosa del cerebelo. (Symmetrical lamellar agnesia of the granular layer of the cerebellum.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 40-44.—The group of the agnesias constitutes an important division of the anomalies of development of the cerebellum. The author presents observations of a peculiar case of agnesia which he encountered in his practice. The case studied was that of a man 69 years of age who suffered from falling attacks, accompanied by loss of consciousness. Periods of depression and excitement with ideas of persecution entered into the case. No convulsions, paralysis, or syphilis were found. A post-mortem examination revealed the following: the lamellae were lacking in one component only, viz., covering of granular material. In the majority of the described cases of total or partial agnesia the defect has been imputed to an inflammatory or arterial process of a pathological nature. Heredity undoubtedly played a part in the etiology of the disease.—J. W. Nagge (Chicago).

4478. Cobb, S. An outline of neuropathology for students of general medicine. Cambridge: Harvard Univ. Press, 1929. Pp. 21.—A loose-leaf manual dealing with a number of neural diseases, among which are familial and hereditary nervous diseases, mental deficiency, epilepsy, psychoses, and psychoneuroses. Bibliography of 57 titles.—N. L. Munn (Pittsburgh).

4479. Courtois, A. Les psychoses par encéphalite. (Psychoses following encephalitis.) *Prophyl. Ment.*, 1929, 6, 38-44.—Studies by the author and authors on cases of encephalitis suggest that many cases of dementia praecox and other recurring mental disorders result from encephalitis, meningitic and poliomyelitic infections, the latter of recurring type. The author expresses the opinion that further study will reveal definite physical bases for many mental disorders previously considered to be purely mental in origin.—M. B. Jensen (Michigan Central State Teachers College).

4480. De Jong, H., & Prakken, J. Vergleichende plethysmographische (psycho-physiologische) Versuche bei normalen und Tabes-Patienten. (Comparative plethysmographic (psycho-physiological) experiments on normal individuals and tabes-patients.) *Acta psychiat. et neur.*, 1929, 4, 65-73.—Following the method of De Jong and using an improved model of Lehmann's plethysmograph (apparatus and method described in text) the reactions to mental and sensory stimuli of seven normal individuals are compared to those of twelve patients with tabes dorsalis. With this special apparatus three definite types of curves are obtained: the normal, semi-spasmodic, and spasmodic. The writers confirm results from others, that the plethysmogram is not to be understood as objective expression of qualitatively different mental conditions, but expresses the general variation of the autonomic tonus of the individual, stimulus thus being of only quantitative importance. The plethysmographic curve is determined not by the kind of stimulus used but by the particular sympathetic tonus of the observer. As an answer to the central problem whether pathological autonomic innervations were to be found in tabes patients the general result is reached, illustrated by three tables, that this is often the case. While the normal individuals gave 77.1% normal curves in response to 83 stimuli, the tabes patients gave only 3.6% of such curves. Great objectivity is ascribed to the method and the writers find confirmation of De Jong's three kinds of curves.—M. L. Reymert (Wittenberg).

4481. De Lisi, —. [On Wilson's disease.] *Riv. pat. nerv. e ment.*, 1929, 34, fasc. 1.—A detailed clinical and anatomic-pathological observation of a case of hepatolenticular degeneration in a 10-year-old boy. The author treats in particular the different clinical, physico-pathological, and semeiological questions which are brought together in this matter. He is opposed especially to the tendency to consider the process of Wilson's disease as spread over all the encephalon, the paretics, and the cortex, affirming the importance of the lesions of the putamen and the caudate nucleus, which approaches that of the globus and the substantia nigra. He describes the characteristics that differentiate Wilson's disease from pseudosclerosis. He then attacks the question of pathogenesis, maintaining against all the theories which affirm its infective origin (encephalitic virus, lues, etc.) the importance of toxic factors. He also considers the heredity of this form, presenting the genealogical trees of two subjects, studied by him.

self, who were judged to be in the second stage. He finally reaffirms the importance which should be given to hepatic alterations in a consideration of different clinical and experimental data in the pathogenesis of this form.—*G. C. Ferrari* (Bologna).

4482. **Dublineau, J.** *Suicide et folie.* (Suicide and madness.) *Prophyl. Ment.*, 1929, 6, 42-49.—This discussion does not deal with cases in which suicide has been decided upon as the only logical solution for an unbearable situation (dishonor, suffering, etc.). Other cases, with a background of mental disorder, are described as falling into several types. There are sex differences in means of suicide chosen, as well as rather definite differences between means chosen by sufferers from various types of mental disturbances. Melancholy is said to cause more than half the suicides. Probable reasons for the findings are advanced.—*M. B. Jensen* (Michigan Central State Teachers College).

4483. **Ehlers, H.** *The blinking reflex in hemiplegics.* *Acta psychiat. et neur.*, 1929, 4, 47-50.—The eyelids may be closed in different ways; in the slow, even closing it is chiefly the palpebral portion of the orbicularis muscle which contracts. This slow closing is a voluntary movement, sometimes called "winking," whereas "blinking" is the rapid movement of the eyelids. According to de Laperonne and Cantonnet the latter takes 0.4 second and is repeated 5 to 6 times a minute. Blinking can be done voluntarily, but is usually an automatic or reflex movement. "Squeezing" is a third form of closing the eyes. In this movement the entire orbicularis enters into function, while simultaneous contraction of other facial muscles may also occur. Squeezing is usually a voluntary movement, though it may occur as a reflex spasm. The writer states that since the upper facial region is not wholly intact in hemiplegia, such patients may be able to perform the usual blinking, winking, and squeezing movements upon command, but when ordered to close the eyes independently it is usually impossible for them to close the eye on the hemiplegic side alone, although this is possible for the other eye. The observations on these patients are discussed (with reference also to animal experiments) in regard to their bearing on existing theories and the practical suggestion is appended that care should be taken in the routine practice of using the blinking reflexes for light and danger in the examination of patients for hemianopia. In delirious or demented patients, in whom a visual field examination cannot be carried out, it is said to be possible, by means of threats to the eyes from various directions, to substantiate a supposed hemianopia. It is evident, however, that the value of such a test is very doubtful, since the blinking reflex for visual impulses may be reduced on one side in cases in which there is no hemianopia, and, further, it is not excluded that we may encounter a lively or even exaggerated blinking reflex on the affected side in a hemiplegic with hemianopia, owing to the absence of inhibition of the reflexes as a result of a hemispheric affection.—*M. L. Reymert* (Wittenberg).

4484. **Eisenstein, I.** *Psychologische Untersuchungen über die verschiedenen Formen des angeborenen Schwachsinn.* (Psychological investigations on the various forms of congenital feeble-mindedness.) *Zsch. f. Kinderforsch.*, 1929, 35, 563-589.—The author investigated in regard to their intellectual qualities about 30 persons of different ages who were congenitally feeble-minded. This was done by a test method connected with a detailed investigation of qualitative behavior. He finally established the following psychological types of feeble-mindedness: (1) the apathetic and the lively types; (2) feeble-mindedness with affective disturbances; (3) feeble-mindedness with amnesic disturbances; (4) forms of feeble-mindedness with disturbances of the dynamics of mental activity, the so-called hypotonic types; (5) feeble-mindedness with deficiencies in the realm of thought as such: (a) synthetic and analytic feeble-mindedness, (b) constructive-combinational incapacity, (c) inferiority in concept formation; (6) feeble-mindedness with abnormal subjectivism or an autistic mental set; (7) partial defects and capacities with generally decreased intelligence; (8) a disproportion between intellectual gifts and mastery of speech. The author feels that he has given an impetus to a general qualitative-psychological classification of feeble-mindedness. He obtained his results by a series of tests arranged specially for this purpose by Gruenthal. The tests all came from the collection of methods of Stern and Wiegmann. They cover the following points: (1a) comprehension, (b) power of observation, (c) idea of space, (d) mastery of speech, (e) suggestibility; (2a) association, (b) ability to understand pictures, (c) conduct in an imagined situation, (d) capacity for criticism, (e) definition; (3a) completion test, (b) three-word method, (c) word-ordering, (d) finding the essential point, (e) comparison, differentiation, (f) order test. The author defines feeble-mindedness in accord with the modern psychiatric terminology; i.e., he excludes the phenomena of dementia acquired in the life-time of the individual and regards as feeble-mindedness only congenital deficiency of reasoning power.—*O. Seeling* (Berlin).

4485. **Fauvel, —.** *Lampenfieber.* (Stage fright.) *Schweiz. Zsch. f. angew. Psychol.*, 1929, 5, 152-154.—*A. Römer* (Leipzig).

4486. **Foz, A.** *Contribucion clinica a la alucinosis cronica.* (A clinical contribution to the knowledge of chronic hallucinosis.) *Bol. d. Inst. Psiquiat.*, 1929, 1, 24-29.—A case study is reported of a man suffering from persistent hallucinations. The subject was 47 years of age, the oldest of five children. The family history revealed no psychopathic trend. From the age of nine the subject had been afflicted with coxalgia of the left side. The periods of sullenness and brooding appeared shortly after. The physical handicap tended to make the youth antisocial, with a continuation of this feature up to the present time. No organic disturbances which could have caused the disease directly were to be found. The hallucination was of an auditory nature; voices, which were condemnatory,

persisted. The individual experienced no attraction towards the opposite sex; there was also a tendency to frequent masturbation. The disease was diagnosed as being purely psychological in nature. The psychoanalytic approach was not made.—J. W. Nagge (Chicago).

4487. Franz, S. I. **The abnormal individual.** In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 809-831.—Mentally abnormal people are classified as feeble-minded, psychotic, neurotic, and geniuses. This article describes the first three types. The three classes of feeble-minded, namely, idiots, imbeciles and morons, are differentiated. Under the heading of psychotic, the conditions due to old age, alcohol, drugs, and spirocheta pallida are first described. Then the three main types of dementia praecox, hebephrenic, catatonic, and paranoid are discussed. Paranoia is distinguished from similar psychoses. The manic-depressive forms are mentioned. The major symptoms of neurotic types, including the hystericals, the psychopathic personalities, the neurasthenics and the psychasthenics, are given very briefly. Bibliography.—M. B. Mitchell (Yale).

4488. Frostig, J. **Das schizophrene Denken. Phänomenologische Studien zum Problem der widersinnigen Sätze.** (Schizophrenie thinking. Phenomenological studies on the problem of irrational sentences.) Leipzig: Thieme, 1929. Pp. 87. M. 4.—The author of this pamphlet intends to furnish a contribution to the general psychology of knowledge through the description of experiences of schizophrenics. His thoughts follow the path of pure phenomenology as traced by Husserl; his description often leans towards Bergson. Each of the numerous existing worlds of consciousness is shut off completely from the rest; a bridge is made through actions, mimic movements and linguistic expressions. The latter are analyzed in detail, as are also the psychological processes which occur during the word formation of normal people, the experience of an object with definite structure, the intentional act, and the interpretation of objects with respect to the total existing empirical conditions. The linguistic expression is perceived collectively, that is, as if it did not belong to a single person but to a group or to the whole of mankind; this collective feeling is missing in the schizophrenic. In this connection some psychological processes of healthy people are discussed which remind one of the experiences of schizophrenics without being identical with them, such as the dream, poetic comparison, confused speech during strong excitement, and the work of expressionistic artists.—H. Triefel (Breslau).

4489. Goldstein, K. **Zum Problem der Angst.** (The problem of anxiety.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 409-437.—The author discusses the distinction between fear and anxiety, and finally concludes that the former demands the recognition of the stimulating object, while the stimulus for the latter is not known; both, however, are experiences of the feeling of danger.

The proof of these definitions, which are based on biological concepts, is found in cases of anxiety which occur in patients having cerebral injuries. In these patients it is found that the impossibility of an adequate response to a stimulus is the basis of the anxiety. A discussion is given of the forms which anxiety may take in various mental and physical ailments and the rôle which it plays in normal life. The anxiety found in very young children and animals is also discussed. The author concludes with a critique of Freud's interpretation of anxiety and anxiety neuroses; the essential disagreement between this interpretation and the author's rests on Freud's emphasis of the importance of the birth trauma in determining all subsequent anxieties.—D. E. Johanssen (Wellesley).

4490. Groddeck, G. **Psychical treatment of organic disease.** *Brit. J. Med. Psychol.*, 1929, 9, 179-186.—Three cases are described in which apparently pure organic diseases failed to respond to medical and surgical treatment. In each case an unconscious significance was attached to the organic disease which yielded to psychical treatment.—M. B. Mitchell (Northampton State Hospital).

4491. Grollman, A. **The effect of psychic disturbances on the cardiac output, pulse, blood pressure and oxygen consumption of man.** *Amer. J. Physiol.*, 1929, 89, 584-588.—Records were made of the normal cardiac output of nine subjects in the third decade of life. Immediately after making each of these records, the professor entered the room and charged the subject with laxity in his work. The psychic disturbance in the different subjects varied from resentment or anger to regret for failure or the feeling that the criticism was meant for associates rather than for himself. The cardiac output in instances of mild disturbance showed an increment of .1 liter, and in cases of extreme disturbance (anger) .9 liters. Pulse and blood pressure manifested similar increments, but oxygen consumption showed only slight increase.—M. J. Zigler (Wellesley).

4492. Hill, L. B. **Teaching as a function of the state hospital.** *Psychiat. Quar.*, 1929, 3, 390-397.—Teaching is considered a specific duty of the state mental hospital. It may be thought of as a means of meeting the problem of personnel, a way to attract intelligent new-comers into the field, a part of the system of development by which these novices may become master craftsmen; or as an essential weapon against the curse of institutional inertia, which unfortunately is nearly as infectious for staff men as for patients. The time is ripe for state hospitals to undertake seriously the task of providing for the public an adequate source of thoroughly trained psychiatric workers, and it should function as the central factor in the mental health activities of the community. To this end, the first step should involve the creation of clinical directorships in the hospitals.—E. T. Burr (Vocational Adjustment Bureau).

4493. Howe, E. G. **Compulsive thinking as a castration equivalent.** *Brit. J. Med. Psychol.*, 1929, 9, 159-178.—Thinking may be governed by an unconscious motive. It may have supreme emotional

value as a castration equivalent. Compulsive thinking may be the means of escaping an emotional conflict due to a parental fixation; the author describes five cases which illustrate this point. Compulsive thinking has characteristics in common with dementia praecox when it leads to seclusion, martyrdom, self-punishment, sexual maladjustment, an escape from reality into thinking, and suicide. When thinking is given genital value an inviolable personality develops. Psychotherapy is difficult in cases of compulsive thinking.—*M. B. Mitchell* (Northampton State Hospital).

4494. **Iwanow-Smolensky, A. G.** *Über pathophysiologische Grundmechanismen der Psychoneurosen.* (Concerning fundamental pathophysiological mechanisms of psychoneuroses.) *Schweiz. Arch. f. Neur. u. Psychiat.*, 1928, 22, 13-34.—The author makes an attempt "to cover the physiological substratum of the psychogenic moment in the etiology and pathogenesis of the neuroses with the help of the present-day physiology of the cerebral hemispheres." For this purpose he compares the results of the "experimental neuroses" of dogs (Pavlov) and of the conditioned reflex activity of neurotics. The "experimental neuroses" occur if one modifies the experimental procedure during the formation of conditioned reflexes in animals. The cerebral hemispheres of the animal are then no longer equal to the "difficult problem" as presented, and the balance between the processes of cerebral stimulation and inhibition is disturbed. The behavior of the animal is temporarily disturbed by the "failure of the nervous system." Analogous to the disturbances in higher animals, the investigations of conditioned reflexes in neurotics by means of "reaction time" and "association experiments" show disturbances of balance of the dynamics of the cortex in the sense of a far-reaching generalization (instead of concentration) of the processes of stimulation or inhibition. The bio-physiological analysis of the behavior of neurotics in the case of difficult problems—obstacles which the bio-social world has presented to the nervous system of the patient—also confirms this insufficient power of the cortex to sift the nervous energy of the instinctive drives (unconditioned chain reflexes) for adaptation to the aims presented by education (conditioned reflexes) and the bio-social environment. The supposedly native inferiority of the capacity of the cerebral hemispheres to form reflexes is activated by the unfavorable conditions of the external environment (exogenous neuroses) and by inheritance (endogenous neuroses). In this way it is possible to distinguish neuroses of making a living, sex, defense, and vocation. 46 references.—*M. R. Lambercier* (Geneva).

4495. **Jacobsen, E.** *Progressive relaxation.* Chicago: Univ. of Chicago Press, 1929. Pp. xiii + 429. \$5.00.—The usual psychoneurotic symptoms are ascribed to neuromuscular hypertension, which can be reduced by voluntary practice in muscular relaxation. The author's technique for progressive muscular relaxation, general and differential, is given; it depends upon learning to recognize muscle tenseness and to relax the sensation away. The author's

experiments indicating reduction of reflexes, and of mental activity when relaxed are given. There are extensive references to and quotations from the literature of neuro-physiology, tending to justify the author's views. Case reports include spastic esophagus, mucous colitis, insomnia, compulsion neurosis, phobia, and neurasthenia as amenable to the method. Reference is also had to its use in manic states. A chapter differentiates this method from suggestion and allied methods, and argues for its superiority over them. There is brief reference to Freudian analysis which the author regards as more time consuming, less fundamental, and less satisfactory in securing lasting effects than is progressive relaxation. Bibliography of 33 pages.—*L. B. Hill* (Sheppard & Enoch Pratt Hospital).

4496. **Kapp, E.** *Zur psychischen Hygiene.* (Mental hygiene.) *Arch. f. Religionspsychol. u. Seelenführung*, 1929, 4, 341-344.—*A. Römer* (Leipzig).

4497. **Karpman, B.** *Psychotherapy and the criminal insane.* *Psychiat. Quar.*, 1929, 3, 370-383.—The author states that our methods of dealing with crime have so far failed in their purpose, since crime is increasing. Our approach toward the understanding of its etiology and pathology has not been productive of satisfactory results, for the basic motives behind the criminal action are not known. Although limited and narrow in its scope, psychiatry has already thrown much light on the nature of crime, and offers the only reasonable and scientifically valid approach. One of the causes of crime is the attitude of the parents and other members of the family towards a given child. Rejected love generates hate, and as this cannot always be given expression, it is repressed, reappearing in later years in an explosive form of criminal behavior. Psychoanalysis, by searching out mechanisms and processes, may reasonably effect a social restitution of the criminal, but its application is expensive, difficult and time-consuming. It offers, however, the surest method of approach. A long case history in which this method was successfully applied is given.—*E. T. Burr* (Vocational Adjustment Bureau).

4498. **Kleist, K.** *Über zyklische, paranoide und epileptische Psychosen und über die Frage der Degenerationspsychosen.* (Concerning manic-depressive, paranoid and epileptic psychoses and the question of the psychoses of degeneration.) *Schweiz. Arch. f. Neur. u. Psychiat.*, 1928, 23, 3-37.—Besides the typical diseases towards which there is a predisposition (the so-called principal psychoses), hysteria, manic-depressive psychosis, paranoia, epilepsy and schizophrenia, there are a number of atypical and unusual diseases which resist classification with the typical diseases. There are a number of atypical diseases that have individual symptoms in common with better known diseases, such as partial symptoms of a syndrome, or characteristics of the pre-psychotic condition of the patient, or inherited characteristics. The unusual psychoses thus appear to be secondary psychoses or psychoses at the fringe of the large types. From this point of view the author describes: the psychoses of confusion and motility, which are unambiguous cycloid fringe

diseases of manic-depressive psychosis; the expansive inspiration psychoses and the disorders with persecutory hallucinations, which, without question, are acute paranoid secondary psychoses of typical chronic paranoia; and the episodic conditions of listlessness, sleep and moodiness, which as epileptoid disorders are placed at the fringe of epilepsy. But there are also peculiar atypical psychoses that can always have an ambiguous place in the system of constitutional disorders. Such are the "ego-psychoses" (expansive delusions and hypochondria), which are to be classified between manic-depressive psychosis and paranoia, and the psychoses of disturbances of relationships and estrangement. Both of these approach with their symptoms the clouding of consciousness (epilepsy) but are also related to paranoia and melancholy. This historical consideration is to be considered only a path towards understanding; it is advisable to classify atypical psychoses naturally, which the author has attempted to do. There is a discussion of schizoid psychoses. Data are given concerning the frequency of atypical as compared with typical psychoses.—*M. R. Lambercier* (Geneva).

4499. Kollarits, J. *Wie leitet der Charakter den Kampf gegen die Tuberkulose?* (How does character guide the fight against tuberculosis?) *Schweiz. med. Woch.*, 1928, 58, 885-888.—Daily observation, clinical observation and experiment show that a character factor has an influence on the course of tuberculosis. This factor, which is to be thought of as the inclusive concept of the will, corresponds in our consciousness to feelings and emotions. The vegetative nervous system, the best known center of which lies in the vegetative center of the mid-brain, is the origin of the paths and impulses to the inner organs, namely, to their histological powers of resistance. The mental side of the function of this center shows itself in the feelings of pleasure and pain which are correlative with its physical function. Therefore this center is to be regarded as a physical and mental regulator of the fight against tuberculosis and every other infection. The relation of the mid-brain to the vegetative functions of the over-lying cortex is not sufficiently well known to be theoretically considered. Bibliography of 26 titles.—*M. R. Lambercier* (Geneva).

4500. Maier, H. *Psychiatrie und Psychotherapie.* (Psychiatry and psychotherapy.) *Schweiz. med. Woch.*, 1928, 58, 741-746.—An inaugural academic dissertation in which the relations between psychiatry and psychotherapy, the development of modern psychotherapeutic treatment (with Braid, Liebau, Richet, Charcot, Bernheim, Forel, Freud, Jung, and Adler) and finally lay psychotherapy and the training of psychotherapists, are discussed.—*M. R. Lambercier* (Geneva).

4501. Mansfield, H. L. A case of congenital auditory aphasia complicated by amentia. *Tr. School Bull.*, 1929, 25, 129-134.—This is one of several studies being made at the Training School. Auditory aphasia is one of the less familiar forms of aphasia and is usually accompanied by visual and motor aphasia. Word deafness is not synonymous

with it, as the person is not deaf. In complete aphasia he lacks discrimination between sounds. The case of Fred E., a case of incomplete auditory aphasia since infancy, is studied; he hears spoken words which mean nothing to him. He is 12.3 years of age and has been studied for two years. On the Binet test he scores four years, but on non-verbal tests his scores range from 8 to 16 years. His speech is difficult to understand. He is trainable only along manual and industrial lines. He is capable of hearing language sounds but cannot discriminate any except very familiar ones. The aphasia is probably congenital, since he has never had paralysis. He walked at 19 months but did not talk until 8 years of age. Methods of treatment are obscure for this type of aphasia; lip reading might be suggested, but would hardly be profitable for one with inferior general mental level. Manual classes offer the best opportunity, and teachers should accompany their instructions with demonstrations. Individual attention in the institution makes the child cited a fairly efficient worker, but outside he would be sadly misunderstood.—*E. M. Achilles* (Columbia).

4502. Marchand, L. *Des lésions encéphaliques dans les psychoses aiguës.* (Encephalic lesions in acute psychoses.) *Ann. Anat. Path. Méd.-Chir.*, 1927, 4, 312-314.—(Courtesy *Biological Abstracts*).

4503. Mari, A. [An unusual post-encephalitic tic.] *Riv. pat. nerv. e ment.*, 1929, 34, fasc. 2.—The author describes a case of tic of the tongue and of respiration. The subject presented a typical parkinsonian syndrome as a result of epidemic encephalitis, although the acute stage had not been definitely reached. There were also certain rare oculogyric attacks. The author believes for the following reasons that the particular hyperkineses presented by the patient come without any doubt from an encephalitic origin and are due to a lesion of the corpus striatum: the absence in the subject of the psychological characteristics usual in tic cases, the absolute absence of voluntary action, the invariability of the tics, the evident sedative action of scopolamin, and other signs of an extrapyramidal nature.—*G. C. Ferrari* (Bologna).

4504. Mayer-Benz, L. *Schriftdeutung jugendlicher Psychopathen.* (Graphological interpretation of youthful psychopaths.) *Zsch. f. Kinderforsch.*, 1929, 35, 637-649.—These handwriting interpretations deal with material from the Bureau of Guidance in Mental Hygiene in Berlin. It is not a case of interpreting individual handwriting samples, but of interpreting samples of different age-levels and developmental stages of the same writer. The above essay is the result of the first experimental series. The author knew nothing about the writers except their birthdays. The interpretations are intentionally not put in the form of a strict constitutional conception, but are rather a description of dispositions beside the developmental process. After the author has given her opinion of the writer, there follows an abstract of the developmental history of each, taken from the records of the Bureau of Guidance of Mental Hygiene. This is given by Ruth von der Leyen. The considerable agreement is in

favor of the still greatly questioned science of graphology.—O. Seeling (Berlin).

4505. Melcher, R. T. **Mental deficiencies resulting from birth injuries.** *Tr. School Bull.*, 1929, 26, 8-10.—The medical profession estimates that 5 to 75% of infantile cerebral spastic paralyses are due to birth injuries. At Vineland there are 14 children who fall within the general category of birth injury and birth palsy. Special training has been used with this group. The purpose of research with them has been (1) to describe birth injury as a clinical category of mental deficiency by enumerating its mental and physical characteristics, (2) to formulate more accurate means of ascertaining the actual mental ability of subjects in whom both language and motor handicaps make measurement by present psychological methods unsatisfactory, (3) to observe by the use of these methods any mental development which might accompany the motor development which results from physiotherapeutic treatment. The length of the period of mental development in birth injury is extended past the usual early adolescent limit. Rising intelligence quotients are shown in nine of the fourteen cases, the increase being from 6 to 33 points. There seems to be a tendency toward spurts of development rather than steady growth.—E. M. Achilles (Columbia).

4506. Meyer, E. **Vom walden 1900 der Antike zur Homosexualität der Gegenwart.** (From the walden 1900 of antiquity to the homosexuality of the present.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, 16, 225-235.—An attempt to throw light upon erotic love. The opinions of many authorities on homosexuality are quoted. A longing for youth may be a factor in homosexuality. Another factor is the cherishing of traits peculiar to one's own sex; this would account for the large number of homosexuals among soldiers and sailors, who consider bravery a most desirable trait in their sex. The author concludes that the homosexual differs from his fellow men in neither body nor soul; he should not be looked upon as sick, degenerate or criminal.—H. S. Clapp (Southboro, Mass.).

4507. Milt, B. **Epilepsie: Medizinhistorische Dokumente aus dem 16. Jahrhundert.** (Epilepsy: medico-historical documents from the 16th century.) *Schweiz. med. Woch.*, 1928, 58, 890-895.—The authors of this manuscript, which is published here for the first time, are the physicians Conrad Gesner (1516-1565) and Fernelius (1485-1558). Both of them regard epilepsy as a disease of the brain, just as natural and just as marvelous as any other disease.—M. R. Lambercier (Geneva).

4508. Myrick, H. L. **Mental hygiene as a character builder.** *Rel. Educ.*, 1929, 24, 652-658.—The author discusses points of special interest found in ten recent books on mental hygiene.—J. P. Hylan (Stoneham, Mass.).

4509. Nachmansohn, M. **Genese und Struktur eines Falles von Schizophrenie.** (The genesis and structure of a case of schizophrenia.) *Schweiz. med. Woch.*, 1928, 58, 270-271.—The case is that of a 28-year-old man, with remission phases, who suffers from spontaneous castration and in whom,

due to difficult individual experiences, the resistance capacity of consciousness has been decreased. The complexes which thus developed were the chief symptoms. Of interest is the close connection between dreams which the patient had in a narcosis during his 14th year and those which appeared 8 years later in hallucinations. Conversations and persuasion therapy brought about a real though only temporary improvement.—M. R. Lambercier (Geneva).

4510. Pierce, S. W., & Pierce, J. T. **The layman looks at doctors.** New York: Harcourt, Brace, 1929. Pp. 251. \$2.00.—The history of a stubborn case of hysteria, with conversion symptoms, written by the patient and her husband. Experts in many fields of medicine were consulted and their recommendations followed, without amelioration; complete cure was at last effected by psychoanalysis.—R. R. Willoughby (Clark).

4511. Popea, A., & Eustatzion, G. **Contribution à l'étude de la pathogénie et du traitement de certaines névroses.** (A contribution to the study of the pathogenesis and the treatment of certain neuroses.) *Schweiz. med. Woch.*, 1928, 58, 831-833.—The authors have treated sympathicotonic neurotics, who all have a negative oculo-cardiac reflex or none at all, with tartrate of ergotamin combined with a protein shock. (Ergotamin is an alkaloid discovered by Stoll in 1918 in wheat ergot. It is an inhibitor of the sympathetic.) In the ten observations which are presented the patients were helped or completely cured, while the authors reported a re-establishment of the vago-sympathetic equilibrium. The authors wonder whether certain troubles presented by neurotics do not depend on the equilibrium of the vago-sympathetic tonus.—M. R. Lambercier (Geneva).

4512. Redalié, L. **Aptitude au mariage et troubles mentaux (à propos du certificat médical pré-nuptial).** (Fitness for marriage and mental affections (in relation to a pre-marital certificate).) *Schweiz. med. Woch.*, 1928, 58, 289-290.—The psychiatrist who is consulted by people about to marry has to solve a double problem: harmonization of characters and hereditary transmission of mental taints. The task is relatively easy in well-marked psychoses, but it is very difficult in the case of cured psychoses or neuroses. The present means of investigation lack precision and are insufficient to render a pre-marital certificate obligatory. The best way to combat undesirable marriages is the propagation of ideas of mental hygiene and prophylaxis and the institution of "pre-marital psychiatric consultations." The author gives personal examples and the opinion of authors like Raecke, who arrive at the same conclusions.—M. R. Lambercier (Geneva).

4513. Richtzenhain, W. **Psychiatrie und Christentum.** (Psychiatry and christianity.) *Psychiat.-neur. Woch.*, 1929, 31, 208-210.—A. Römer (Leipzig).

4514. Schiegg, A. **Die Übungstherapie in der Stimmheilkunde.** (The therapy of practice in vocal training.) *Hilfsschule*, 1929, 21, 213-219.—The author deals only with the so-called functional vocal disturbances of vocal organs that are otherwise anatomically normal. Such functional disturbances

are: (1) convulsive vocal disturbance (aphonia spastica); (2) functional paralysis of the voice; and (3) functional weakness of the voice. The author has no experience of the functional paralysis of the glottis (aphonia hysterica), which falls under (2). In recurrent paralysis the author has had successes with curative pedagogy. He succeeded in moving the still present normal voice-lip so far as to occasion sympathetic vibrations in the diseased lip, which was in the death position. It is the author's opinion that the majority of people suffering from functional speech disturbances are to be classed as phonasthenics. He differentiates (in agreement with Flatau) the phonasthenia of speakers, singers and commanders (rheseasthenia, dysodia and kleseasthenia). On the basis of several case histories the author declares in favor of exercise therapy, which in addition to clinical treatment has fully justified itself.—O. Seeling (Berlin).

4515. Simmel, G. **Psychoanalytische Gesichtspunkte zur Psychotherapie der Psychose (Schizophrenie).** (Psychoanalytical point of view as to the psychotherapeutic treatment of a psychosis (schizophrenia).) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1929, 2, 437-448.—The author recommends psychoanalysis for patients suffering from schizophrenia, since what the schizophrenic mainly lacks is adjustment with his environment (organic complications are rare, and of minor importance when they do occur). This maladjustment develops out of an earlier familial difficulty, usually a conflict of the Oedipus-complex type. The conflict between the id and reality precedes the conflict between the id and the super-ego which ultimately produces the catastrophe. The author emphasizes the importance of a thorough knowledge of the schizophrenic's infantile behavior. The difficulties of this method of treatment, demanding time and the personal supervision of a skilled psychiatrist and trained attendants, is pointed out.—D. E. Johansen (Wellesley).

4516. Steckel, H. A. **The need of sheltered work shops in the community rehabilitation of mental patients.** *Psychiat. Quar.*, 1929, 3, 404-408.—Our insight into the possibilities for the rehabilitation, through occupational therapy, of thousands of physical and mental wrecks has come as a result of the World War work for soldiers returning from the fields of battle. There is a great need in all large communities for occupational therapy centers which may function as half-way stations for patients between the hospital and industry proper. It is often difficult to obtain immediate employment for a paroled patient, and even a short period of idleness may have a disastrous effect upon his morale. The community workshop should provide the bridge for this perilous gap, and may furnish the means for gradual growth through progressive stages toward the ultimate goal of industrial rehabilitation.—E. T. Burr (Vocational Adjustment Bureau).

4517. Tower, J. L. **Disposition of the high grade defective.** *Psychiat. Quar.*, 1929, 3, 384-389.—The subject is discussed from the point of view of the psychiatrist working in the community and dealing

with economic, sociological and educational problems. Certain high-grade defectives, of the psychopathic or emotionally unstable type, are destined to be segregated and lead their lives apart from the community. But there is a distinctly different type which can be trained for future community service. If in institutions, such children should be early adapted to social life, should have, under supervision, opportunities for association with the opposite sex, and should receive thorough training in all social problems. A state school for social rehabilitation of carefully selected groups might be established, in which the incentive of training for life in the community might be offered.—E. T. Burr (Vocational Adjustment Bureau).

4518. Wiesli, P. **Eine Methode zur Frühdiagnose der bitemporalen Hemianopsie bei Hypophysentumoren.** (A method for the early diagnosis of bitemporal hemianopsia with hypophyseal tumors.) *Schweiz. med. Woch.*, 1928, 58, 479-483.—In the diagnosis of hypophyseal tumor the investigation of the visual field for hemianopsia still plays an important part. If it is a question of early diagnosis, the methods of Foerster and Bjerrum, which have hitherto been used, are not always sufficiently minute. The method presented here is Vogt's improvement of Bjerrum's method, in which the distance of Bjerrum's curtain is increased from 1-2 meters to 4-6 meters (with average illumination the object size is 3-5 mm.). The description of 8 cases shows the importance of the method in all eye diseases. Bibliography of 7 titles.—M. R. Lambercier (Geneva).

4519. Würz, P. **Über die Blutgruppenverteilung bei Schizophrenen.** (On the distribution of blood-groups in schizophrenic patients.) *Schweiz. med. Woch.*, 1928, 58, 353-355.—Blood tests of 334 schizophrenics of the Canton of Basel and control with 3,017 blood tests examined for blood groups (of Basel residents) show that in schizophrenics there are slight deviations in the frequency of the blood-groups B and AB (nomenclature of Jansky) as compared with the control group. Group B is found specifically for schizophrenia as differentiated from other mental diseases. In none of the sub-groups of schizophrenia is a blood-group extremely frequent or rare, but this does not affect the theory of the unity of schizophrenia from this point of view. Bibliography of 30 titles.—M. R. Lambercier (Geneva).

4520. Zalla, M. [Trauma and the symptomatology of lateral amyotrophic sclerosis.] *Riv. pat. nerv. e ment.*, 1929, 34, fasc. 1.—The author describes the case of a patient, aged 55 years, who up to that age had enjoyed good health and who, following a fall from a height of about 2 meters, showed immediately phenomena of a medullary disturbance (tetraplegia, paresthesia, and bladder paralysis) and later a syndrome which corresponded to the symptoms of lateral amyotrophic sclerosis: tetraparesis, atrophy of certain muscles of the upper limbs, pyramidal hypertonia, accentuation of reflexes, profound vasculo-fibrillary contractions, and modifications of electric excitability. However, there were no objective sensory disorders. After showing

the identity of the described syndrome with that of lateral amyotrophic sclerosis, the author asks whether, for lack of any anatomical manifestation, the case is a question of a syndrome determined by particular anatomo-pathological lesions directly produced by the wound or, rather, a true form of lateral amyotrophic sclerosis brought on by the wound. The author does not believe that in this case the wound can be considered solely as the occasioning cause.—*G. C. Ferrari* (Bologna).

4521. *Zilocchi, A.* [Contemporary psychopathology.] *Riv. pat. nerv. e ment.*, 1929, 34, fasc. 2.—The article deals with certain considerations of a general order on the tendencies of present-day psychiatry. The author, true to his old convictions, asserts the superiority of the somatic and clinical method over psychological and other methods. Somaticism should also take into account data furnished by endocrinology and by constitutionalism, without having to attribute to them any fundamental value, but only a value integrative to the former (somaticism), as in other researches of a psychological nature. In summarizing, the author gives major importance to somatic symptoms of every kind, demanding a careful and complete analysis; and he believes that, even in research on pathogenetic data in cases which have been submitted to the examination of an alienist, the alienist ought to depend especially on data resulting objectively from the case examined, without resorting to vague and indefinite conceptions, such as, for example, degeneration.—*G. C. Ferrari* (Bologna).

4522. *Zueblin, E.* Über die Einwirkung von klimatologischen Faktoren auf das Befinden unserer Patienten. (On the influence of climatological factors on the health of our patients.) *Schweiz. med. Woch.*, 1928, 58, 933-936; 966-973.—The first part of this study considers the results of the determinations of variation of ionization of the atmosphere (so-called normal loss) with the fontactoscope of Elster and Geitel (a kind of double gold leaf electroscope). The normal loss has been measured under various conditions (weather, time of day, atmospheric pressure, strength of illumination). The second part deals with the observations of pain intensity in bone lesions, which depend not only on internal factors but also on external influences such as strength of illumination, degree of ionization (emanation) of the air, and light rays. The degree of saturation of the air and the position of the barometer have only a very slight direct influence on the perception of pain. The question still remains open why normal people in the same weather conditions do not have increased pain sensibility. Bibliography of 18 titles.—*M. R. Lambercier* (Geneva). [See also abstracts 4327, 4525, 4530, 4559, 4578, 4579, 4608, 4625, 4633.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

4523. [Anon.] Work in progress, vocabularies, the principles of translation, neologistic orthology. *Psyche*, 1929, 9, 1-30.—Work in progress consists largely, as above indicated, of accounts of progress

of the movement for a universal language. This is taken in connection with the vocabulary of the average man; of men of history such as Shakespeare, Dr. Johnson, Lord Bacon, and others; of children. While it may be difficult sometimes to translate words from one language to another because they are what the French call "untranslatable," still behavioristic principles may be used with more or less success.—*T. R. Garth* (Denver).

4524. [Anon.] International Orthophonic Archives. *Psyche*, 1929, 9, 88-95.—Edison produced the "kinetophone," and the talkie of today is little more than his invention, although it waited upon De Forest's discovery of the triode valve. The most active research in this field at present is going on in France, Germany, America, and Sweden. England was engaged in the competition, but dropped out. Recording and producing of sound in connection with pictures has been effected in three ways: mechanical, optical, and magnetic. All these methods need perfecting, since each has its defects.—*T. R. Garth* (Denver).

4525. *Barnes, C. R.* Is there a technique for the cure of souls? *Rel. Educ.*, 1929, 24, 619-623.—The many forms of maladjustment from which people suffer are best treated through the personal interview. In order to be thoroughly proficient in this, the priest should be thoroughly versed in sociology and psychology.—*J. P. Hylan* (Stoneham, Mass.).

4526. *Bennett, E. S.* The problem of conduct. *Psyche*, 1929, 9, 73-77.—The subject-matter of ethics is such aspects of conduct as are known as moral. The modern citizen finds himself urged simultaneously by at least two opposing forces, viz., self-interest and altruistic impulse. Idealism is merely a belief that there is some sort of abstract duty. However, in the light of scientific psychology, this is erroneous. Against this destructive view we have two constructive ideals: (1) religion, and (2) enlightened freedom of conduct.—*T. R. Garth* (Denver).

4527. *Billings, T. H.* The great awakening. *Essex Inst. Hist. Coll.*, 1929, 65, 89-104.—The decade of the 1740's in the colonies resounded with the waves of a religious revival. Various factors created the state of mind which made such a movement possible, particularly in New England: belief in the supernatural; preoccupation with the thought of hell; belief in man's natural depravity; the mood of fear and helplessness latent in their religion and accentuated by recent Indian wars, leading to a search for a mystical assurance of salvation commonly identified with "conversion." Of prime importance were the personalities of Edwards and Whitefield and the rise of a group of itinerants. These especially encountered opposition. They were charged with unwarranted censoriousness and with making claims of direct inspiration. There was resentment also at their presuming to come into parishes uninvited, leaving behind them a welter of dissension. By 1750 the movement had waned and religious apathy had set in, in part a reaction against the emotional debauch. There were, of course, many genuine reformations, but these came at too great a cost in emotional stability and in the

standing of religion among men of intelligence. The New England clergy never regained their former dominant position.—(Courtesy *Social Science Abstracts*).

4528. Bogardus, E. Second generation Mexicans. *Sociol. & Soc. Res.*, 1929, 13, 276-283.—Although Mexican immigration is old, the public and even sociologists are just beginning to take note of the problems connected therewith. The problems are most acute, as with other immigrant groups, in the second generation. Delinquency is high; adjustment to school difficult. There is a terrific conflict with the older generation. Then, even after a Mexican youth has broken with the culture of his parents, gone through school with much hardship, there is no place for him outside the accepted Mexican occupations. For in the eyes of his American neighbors he is still a "dirty greaser."—(Courtesy *Social Science Abstracts*).

4529. Bolley, A. Zum Problem des andächtigen Gebetes. *Ergebnisse einer Befragung von Jugendlichen*. (The problem of devotional prayer. Results of questioning adolescents.) *Zsch. f. Ascese u. Mystik*, 1929, 4, 1-28.—The following topics are discussed: different attitudes of the one who prays; auxiliary methods in the devotional life, such as folding the hands; chief methods in the devotional life, the text-bound and the text-free; the heart of the devotional experience; the attitude of the ego; the attitude of the soul toward reality.—A. Römer (Leipzig).

4530. Bowman, K. M. Religious problems in clinical cases. *Rel. Educ.*, 1929, 24, 631-635.—We find in society today two opposing tendencies. One is to discard restraints, while the other is to insist upon maintaining a special set of rules as a guide to conduct. In recent years young persons show a much stronger tendency to question orthodox beliefs. These two tendencies are illustrated by two hospital cases in which the difficulties centered around religious beliefs.—J. P. Hylan (Stoneham, Mass.).

4531. Bowman, L. E. Group and community organization. *Amer. J. Sociol.*, 1929, 34, 1081-1088.—Studies of racial groups have been investigations of complex relations. City planners have emphasized neighborhood unity. Adult education methods have had increased attention in group organizations. Studies of communities have emphasized cultural inquiries, as in the Lynds' *Middletown*.—E. R. Groves (North Carolina).

4532. Burdick, E. M. A group test of home environment. *Arch. of Psychol.*, 1929, No. 101. Pp. 115.—The present study develops a group test for determining the home background of children. In constructing the test two main problems arose: What specific details should be selected which would throw light on the particular phases of home life selected for study? What test devices should be used to elicit the desired information concerning these details? Questions concerning magazines, books, flowers, manners, music, sports, slang, bootlegging, etc., were asked. Tests for good manners were taken from Cora Orr's work. True-false and multiple choice techniques were used. These apperception

tests and the scoring keys are reproduced in the monograph. The Character Education Inquiry is using the test.—E. M. Achilles (Columbia).

4533. Burgess, E. W. Communication. *Amer. J. Sociol.*, 1929, 34, 1072-1080.—A record of the development of transportation and communication during 1928. The automobile, motion picture, aeroplane, and radio have most influenced social life, and have tendered to decrease neighborhood control and enlarge the freedom of the individual.—E. R. Groves (North Carolina).

4534. Crosby, S. B. A study of Alameda County delinquent boys, with special emphasis upon the group coming from broken homes. *J. Juven. Res.*, 1929, 13, 220-230.—About 300 delinquent boys appearing before the Alameda (Cal.) County juvenile court in 1926 were studied with respect to the problem of the nature of their delinquencies and the condition of the homes from which they came—i.e., whether broken or unbroken. Relatively more of the delinquents came from broken homes than the incidence of the latter in the general population would lead one to expect. Among the charges listed relatively more frequently against the boys from unbroken homes were crimes against property, disturbing the peace, and violation of the state motor vehicle acts; against boys from broken homes, incorrigibility, rape, and truancy. The amount of education which the two groups of boys had received was about the same. A relatively greater number of the boys from broken homes were employed than from unbroken; and of the former group, the homes from which the mother was absent furnished the greater number of employment records. The incidence of institution commitments was larger among the boys deprived of parental supervision.—H. L. Koch (Texas).

4535. De la Boullaye, H. P. Les relations entre l'évolution sociale et l'évolution religieuse. (The relations between social and religious evolution.) *Correspondant*, 1929, 100, 188-212.—Societies may be classified provisionally into four types: very primitive; more evolved; very hierarchical; and democratic. In very primitive societies there exists the monogamous family, a severe morality, and an animistic religion, which is polytheistic in that it recognizes a multiplicity of supernatural beings, but gives supremacy to one. Among the totemic hunters, the weakened family and strengthened tribe make religion an affair of the group; among the nomads religion "attaches to the hearth," the chief of the family is a *rex sacrorum*, and manism is supreme; among the agricultural tribes, the men develop secret societies as a defense mechanism against woman's hegemony. In the very hierarchical societies, polytheism prevails. In democratic societies, the sovereignty of numbers and the growing power of money have important effects on religious psychology. Thus there are several important correlations; animism prevails in the most primitive societies; magic, existing in all societies, reaches its acme in tyrannical despotisms; polytheism prevails in hierarchical societies but does not owe its preeminence to the introduction of the monarchical regime. Social

constraint, to which the Durkheim school attributes the formation of religious beliefs, is relatively feeble in primitive societies, stronger in the familial type, and attains its maximum in tribal societies.—(Courtesy *Social Science Abstracts*).

4536. Densmore, F. *Papago music*. Washington, D. C.: Gov't Printing Office, 1929. Pp. 249. \$1.25.—R. R. Willoughby (Clark).

4537. Dittmer, H. *Der religiöse Bewusstseinsinhalt früherer Konfirmanden*. (The religious content of consciousness in young confirmands.) In Dittmer, *Evang. Konfirmandenunterricht im Lichte der heutigen Jugendpsychologie*. Pp. 85-106.—Replies to a questionnaire.—A. Römer (Leipzig).

4538. Drought, R. A. *A survey of studies in experimental aesthetics*. *J. Educ. Res.*, 1929, 20, 97-102.—Thirty-five pictures were shown by the method of paired comparisons to 160 adults, some with, and some without artistic training. The results "showed a definite reaction to the fundamental principles of art." The experiment was repeated with 275 grammar school children and 52 high-school students. "It was found that sensitivity to good art increases with general training and education."—S. W. Fernberger (Pennsylvania).

4539. Ducasse, C. J. *Is art the imaginative expression of a wish?* *Phil. Rev.*, 1928, 37, 360-372.—The author defends his theory, that art is the critically controlled objective expression of feeling, against the theory of D. H. Parker, that art is the imaginative expression of a wish.—A. P. Brogan (Texas).

4540. Dück, —. *Zum Kapitel "Der Hymen"*. (The chapter "The hymen.") *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, 16, 282-286.—The author criticizes Barth in his *Der Hymen* because he considers that too plain a clue was given as to the individuals involved in the following situation: A father, a doctor, would not grant permission for the performance of a vaginal operation on his daughter, a minor. The daughter was therefore forced to endure menstrual pains and irregularities. The author discusses the psychological and sociological phases of the retaining of the hymen as a proof of virginity. Barth's reply (*Erwiderung*) to this criticism is that the question was not personal but sociological; he feels that the father had no right to interfere in this matter, as virginity is a question to be settled between husband and wife. Dück answers Barth (*Antwort*) by correcting 10 minor errors in his original criticism.—H. S. Clapp (Southboro, Mass.).

4541. Emery, E. V. N. *Co-operation between clergyman, psychiatrist, and social worker*. *Rel. Educ.*, 1929, 24, 624-630.—For centuries the problems of mental health, happiness and adjustment were dealt with by the clergy. The social worker and the psychiatrist have invaded this field and brought with them powers of method and penetration. Since the clergyman occupies a position of peculiar confidence with his people he is in a position to use this scientific method to special advantage. This is especially true respecting problems of child

training, the family, marriage and maladjustments.—J. P. Hylan (Stoneham, Mass.).

4542. Farnsworth, P. R., & Beaumont, H. *Suggestion in pictures*. *J. Gen. Psychol.*, 1929, 2, 362-366.—The preference ratings of pictures was influenced to a considerable extent by the use of suitably composed descriptive paragraphs. 64 university students were used as subjects. 2 tables.—H. Cason (Rochester).

4543. Federhofer, F. *Die religiöse Entwicklung im Jugendalter*. (Religious development in adolescence.) *Pharus*, 1929, 20, 81-89.—An appreciation of Eichel's work.—A. Römer (Leipzig).

4544. Flügel, J. C. *On the mental attitude to present-day clothes*. *Brit. J. Med. Psychol.*, 1929, 9, 97-149.—A questionnaire consisting of 24 questions regarding clothing was filled out by 132 subjects of both sexes and widely varying ages and occupations. The questions covered subjects of hygiene, convenience, comfort, appropriateness, convention, and beauty in clothing, and permitted suggestions for improvement. One question dealt with the time given to dressing and degree of concentration on dressing. Another question asked whether the subject's chief interest in dressing was to meet the approval and admiration of his own or the opposite sex, whether the fear of criticism was greater from his own or the opposite sex, and whether he attached more importance to the advice of his own or that of the opposite sex. There were questions pertaining to dreams of being insufficiently or inappropriately clothed, wearing the clothes of the opposite sex, and satisfaction from uncomfortable clothing. The subjects were asked to rank themselves on a five-point scale with respect to relative care and forethought in dressing, time spent in purchasing and fitting clothes, amount of time they were conscious of the impression their dress made on others, and their observation of the clothing of others. In so far as possible the answers were classified and tabulated. A brief suggestion of various "types" was given in conclusion.—M. B. Mitchell (Northampton State Hospital).

4545. Gait, E. *The Indian linguistic survey and the vernaculars*. *Asiatic Rev.*, 1928, 24, 604-627.—In 1894 work was begun on a language survey of India, excluding Madras, Mysore, Hyderabad and Burma. Sir George Grierson, who was placed in charge, made use of the Indian administrative service in collecting data. A total of 179 languages and 544 dialects were dealt with. In the report, recently issued, there is a description and an account of development for each language, together with a skeleton grammar and specimens of the language. Intensive study of certain language groupings has served to correct not a few misconceptions concerning their interconnection and proper classification. One conclusion is that the Aryan languages are everywhere superseding the non-Aryan.—(Courtesy *Social Science Abstracts*).

4546. Gehlke, C. E. *Crime*. *Amer. J. Sociol.*, 1929, 34, 1108-1115.—The U. S. Bureau of the Census reports an increase of 8% in the population of prisons from January 1, 1927, to January 1, 1928.

Improvement is being made in New York State in the collecting of statistics on crimes and criminal justice. In New York and Pennsylvania crime commissions have been investigating the conditions that influence law violation. Progress is being made in both federal and state probation practices.—*E. R. Groves* (North Carolina).

4547. Giese, F. *Die öffentliche Persönlichkeit. Statistische Untersuchungen an geistigen Führern der Gegenwart.* (The public personality. A statistical study of the intellectual leaders of the day.) *Beihefte z. Zsch. f. angew. Psychol.*, 1928, No. 44. Pp. 249.—A biographical-statistical study of 10,000 famous contemporary Germans selected from the 1912 to 1922 editions of *Wer ist's?*, the *Who's Who* of Germany. Men and women from all fields of endeavor, the arts, the sciences, philosophy, technology and "practical life" are included. Author differentiates three "functional structure-classes": (1) the professionally efficient (Pe) type attains prominence through unusually efficient services in a strictly limited field; (2) the professionally productive (Pp) type enriches the profession by original contributions or by extending its scope; (3) the freely productive (Fp) type creates something new without reference to any circumscribed profession. Emphasis is placed on those frequently occurring cases in which, for one or another indicated reason, renown is attained in a field of activity other than that in which the person is "officially" engaged or in which he earns his livelihood. Some of the problems treated: year of birth, age, and age limits most favorable for prominence; mortality rates in various professions; importance of proper combination of personal proclivity and environmental opportunity; geographical influences; heredity and home environment; social level; education; number of children in families of the prominent, and marital happiness.—*H. W. Nissen* (Yale).

4548. Gillette, J. M. *Rural life.* *Amer. J. Sociol.*, 1929, 34, 1089-1098.—Mechanical and scientific changes have increased the mobility of rural people. The country has lost heavily in exchange of populations between town and country. There has been an actual decrease of the farm population. Relatively, the total income of families has been decreased.—*E. R. Groves* (North Carolina).

4549. Groves, E. R. *The family.* *Amer. J. Sociol.*, 1929, 34, 1099-1107.—Although the history of the family for 1928 in the United States has nothing spectacular, divorce has increased and in some cities there has been a decline in marriages and in births. Studies of the family have increased. There is evidence that Europe is beginning to feel influences that disintegrate family experiences in this country.—*E. R. Groves* (North Carolina).

4550. Gruhn, W. *Die empirische Religionsforschung der Gegenwart.* (The contemporary empirical study of religion.) *Arch. f. Religionspsychol. u. Seelenführung*, 1929, 4, 6-18.—*A. Römer* (Leipzig).

4551. Gumpelmaier, B. *Die katholische Internats-erziehung und die moderne Mädchenpsyche.* (Catholic boarding school education and the mind of the

modern girl.) *Blät. f. Anstalts-Päd.*, 1929, 19, 65-76.—*A. Römer* (Leipzig).

4552. Hambly, W. D. *The golden age—a study of warfare in relation to survival and progress.* *Open Court*, 1929, 43, 1-15.—The argument in favor of war as a factor in social progress hinges largely on the question whether man is everywhere pugnacious. How about the simple hunters of Rousseau's golden age? A survey (pp. 4-10) of the various simple peoples now occupying the periphery of the ethnological map of the world—extinct Tasmanians, Australian aborigines, Punans of Borneo, Andamanese, Todas, Veddahs, Bushman, Negrito pygmies of Africa and the Malay Peninsula, Tierra del Fuegians and Eskimos—shows that none of them has anything approaching organized warfare. As over against them the great civilizations were largely built by the sword; and, though they also perished thereby, they bequeathed to posterity great cultural advances. Nevertheless the next stage in international relationship depends on the recognition that war is an expression of the emotions of the mob mind skillfully manipulated. A proper utilization of the resources of schools, the press, the church and the family would build a rational outlook making war an antiquated device.—(Courtesy *Social Science Abstracts*).

4553. Hammer, L. F. *The relation of public recreation to delinquency.* *Amer. City*, 1929, 40, 119-120.—Many claims for credit to playgrounds in the reduction of juvenile delinquency are based upon unscientific generalizations. More study is needed before accurate statements can be made. Recent studies in restricted areas tend to support the general belief that playgrounds do lead to less delinquency, but not in the degree that has in some cases been supposed. Other factors have been operative. Training in the proper use of leisure time should form a valuable part of the rehabilitation program of our prisons.—(Courtesy *Social Science Abstracts*).

4554. Hatfield, H. S. *The talkie and its creators.* *Psyche*, 1929, 9, 78-81.—One thing we can learn from history is that we learn nothing from it. This is the case with the talkies, for though Edison in 1899 had shown the way for obtaining talking pictures it was left for Hans Vogt, a German, to supply by 1922 the initiative, and to secure the funds for their actual successful production. Research institutions neglected the opportunity, and it was left for Vogt and his associates working unaided by any special facilities to take advantage of it.—*T. R. Garth* (Denver).

4555. Herbertz, —. *Das Seelenleben des Strafgefangenen.* (The mental life of the convict.) *Psychol. Rundschau*, 1929, 1, 2-3.—Characterology with writing tests.—*A. Römer* (Leipzig).

4556. Herskovits, M. J. *Race relations.* *Amer. J. Sociol.*, 1929, 34, 1129-1139.—An investigation of the Bureau of Indian Affairs has led to radical recommendations concerning changes of administration. These proposals have not yet been carried out. There has been little change in the relations of blacks and whites in this country.—*E. R. Groves* (North Carolina).

4557. Hofstätter, R. Ähnlichkeit, Gattenwahl und Ehe. (Resemblance, choice of mate and marriage.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1929, 16, 242-257.—This is an attempt to show the relationship between resemblance and marriage. Similarities in a couple may be either primary or secondary in character. The former include those cases in which husband and wife show marked resemblance in physiognomy; the latter include marriages of long standing in which the couple have similar reactions to situations, tone of voice, manner of laughter and carriage, etc. Tables with data about 87 couples married over five years are given. Twenty-one possessed primary similarities; of these 74% were happily married. Sixty couples showed no similarities; of these 46.6% were happily married. Tables showing the fertility of couples with similarities are classified as to successful and unsuccessful marriages. Additional tables showing sterility and miscarriages of couples with similarities are also given. Social position and constitution and temperament are briefly discussed. The mechanism of secondary similarities of couples is taken up in some detail, as is also the danger of infantile fixation. The author concludes that the young people do not know these things at the time of selecting a mate; this he considers a good thing.—H. S. Clapp (Southboro, Mass.).

4558. Knuth, W. Die Psychologie des Konfirmandenalters in ihrer Bedeutung für den Konfirmandenunterricht. (The psychology of the age of confirmation in its significance for instruction for confirmation.) *Arch. f. Religionspsychol. u. Seelenführung*, 1929, 4, 217-298.—A. Römer (Leipzig).

4559. Köhler, F. Krankheit und Sünde. (Sickness and sin.) *Geisteskampf der Gegenwart*, 1929, 65, 43-55.—A. Römer (Leipzig).

4560. König, Ed. Das Schämgefühl, sein Einfluss auf die Kulturentwicklung und insbesondere sein Ursprung. (The feeling of shame, its influence on the development of culture and particularly its origin.) *Christ. u. Wissen.*, 1929, 5, 241-251.—A. Römer (Leipzig).

4561. Kühn, H. Psychologische Untersuchungen über das Stiefmutterproblem. Die Konfliktmöglichkeiten in der Stiefmutterfamilie und ihre Bedeutung für die Verwahrlosung des Stiefkindes. (Psychological studies of the step-mother problem. The possibilities for conflict in the step-mother family and their significance for the asocial behavior of the step-child.) *Beihefte z. Zsch. f. angew. Psychol.*, 1929, No. 45. Pp. 162.—The entrance of a step mother into the family circle brings with it multifarious possible sources of conflict. The widespread and deeply ingrained prejudice against step-mothers in general—here illustrated by popular proverbs and stories and by 500 children's essays on the topic, "Step-mother"—is one potent factor in provoking conflict and tension. This prejudice is often furthered, not always for altruistic reasons, by the mother of the first wife. The very difficult and disadvantageous position in which the step-mother finds herself, as compared to the relatively favorable position of the first wife, is a second important factor frequently precipitating conflicts in the family.

Thirdly, the father, by virtue of having a second wife, is exposed to various inner conflicts, which often endangers his unequivocal standing in the family. Public opinion and the reactions of the step-mother form a vicious circle, each aggravating the asperity of the other. The familial conflicts may have no ill effects, outwardly, at least, on the normal, healthy child in a quiet phase of development, but the slightly psychopathic or feeble-minded child, or the adolescent, often reacts to them with developmental changes which may lead to asocial or anti-social behavior. Step-daughters succumb more often to the situation than do step-sons (18.3% and 10.3%, respectively, of the total number of cases of anti-social behavior were attributed to this cause, 1914 to 1922, by official statistics); an explanation for this sex difference is offered.—H. W. Nissen (Yale).

4562. Lowie, R. H. Are we civilized? New York: Harcourt, Brace, 1929. Pp. xiii + 306. \$3.00.—The elements of human culture, food, housing, industries, the family, education, art, religion, etc., are analyzed one by one and in each case the ways of the savage are compared with those of succeeding stages of civilization, with the conclusion that our condition represents no far step from what we refer to as primitive. "Man developed with the conditions of his being, but before the conditions of his well-being." He has not succeeded in adapting himself to the changed environment produced by life in large groups. He is not, and never will be, the master of Nature. In science there has been progress in the accumulation of knowledge, but retrogression in scientific ethics. In short, the comparatively few years separating us from the Stone Age are not marked by radical development. The next 20,000 years may show more progress; on the other hand, civilization may then be on a lower level than today, since we are failing of some earlier ideals. The book is written in a popular, narrative style, accurate but not technical. It is illustrated with sketches relating to primitive life, and contains an ethnological map and references for additional reading.—M. P. Montgomery (Faribault, Minn.).

4563. Maag, P. Psychoanalyse und Seelsorge. (Psychoanalysis and pastoral care.) *Ethik*, 1929, 5, 308-319.—A. Römer (Leipzig).

4564. Mackenzie, W. D. Man's consciousness of immortality. Cambridge: Harvard Univ. Press, 1929. Pp. 87. \$1.00.—The thesis: "all man's life has been hitherto based upon the belief in immortality, and . . . being man he could not think otherwise."—W. C. Poole (Worcester, Mass.).

4565. March, H. Sünde, Krankheit und erbliche Belastung. (Sin, sickness and hereditary taint.) *Allg. Evangelisch-Lutherische Kirchenzeitung*, 1929, 62, 317-324.—A. Römer (Leipzig).

4566. May, M. A. The adult in the community. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 738-785.—The author would divide social psychology into differential psychology and integral psychology. To understand the individual's place in the community, it is necessary to know first how he differs from other individuals. He may differ in

"bodily size, shape, physiological functions, and psychological processes and abilities, as well as in character, temperament and personality." After these differences are known, the problem remains to integrate, to see how he functions in the community as a whole. This is shown by tracing the process genetically from the lower organisms to man. Communication, control, and drive are found to be of prime importance. Bibliography.—*M. B. Mitchell* (Yale).

4567. McCormick, M. J. The measurement of home conditions. *Soc. Sci. Monog.*, 1929, 1, No. 1. Pp. 23.—A review of existing techniques for measuring home conditions. The author notes that the most important contributions to the field appeared during 1928. Most of the scales hitherto used for research purposes will eventually be simplified and modified to meet the needs of the social worker as a method of case work investigation.—*N. L. Munn* (Pittsburgh).

4568. Metzger, K. Die Seele der Abseitsstehenden. (The mind of the one who stands apart.) *Seelsorge*, 1929, 7, 15-22.—*A. Römer* (Leipzig).

4569. More, A. The theory of fictions. *Psyche*, 1929, 9, 31-38.—A word or a phrase is denominated a fiction when it is not to be interpreted literally. Our real entities are to be regarded, provisionally, as sense-impressions, such physical objects as are guaranteed by physics, and mental states. Such words as *form*, *species*, and *range* are classed as fictions. Adjectives appear to be non-fictional when they qualify sensation. Government, state, and university fall under the heading of fictions, since they are super-entities. Units of measurement are to be regarded as fictions. Scientific notations, in fact, are composed of somewhat elaborate structures of fiction.—*T. R. Garth* (Denver).

4570. Mursell, G. R. Decrease in intelligence with increase in age among inmates of penal institutions. *J. Juv. Res.*, 1929, 13, 197-203.—IQ's derived according to the Kuhlmann-Binet and Kuhlmann-Anderson mental examinations were computed for the inmates of the state training schools, reformatories, and prisons in Minnesota, as well as for the cases of a welfare and charitable association in Minneapolis. The data for all individuals with such physical or social handicaps, other than feeble-mindedness, as would obviously influence test performance, were then excluded from the material used to determine the relationship between IQ and age. For the age groups considered, which included 160-3,244 cases for the five-year periods from 15 to 60 years, the IQ decreased with age, a rather marked drop appearing at the 40-45 year level. Some of the explanations offered for the findings are: the increase of senile dementia with age; differences in the educational opportunities enjoyed by the individuals of the various age groups; discrimination against older individuals through the nature of the content of the tests; and persistence of delinquency as a function of degree of intellect.—*H. L. Koch* (Texas).

4571. Ogburn, W. F., & Tibbits, C. Inventions and discoveries. *Amer. J. Sociol.*, 1929, 34, 984-

993.—Believing that inventions and discoveries that apply to science bring about social changes, the author lists 83 important inventions and discoveries recorded for 1928.—*E. R. Groves* (North Carolina).

4572. Pedersen, V. C. The man a woman marries. New York: Minton, Balch, 1929. Pp. xiv + 266. \$2.50.—This volume is a sociological treatment of the obligations of man to woman and of woman to man in wedlock, based primarily upon a physician's perspective of the many sexual problems confronting the medical practice. Conditions, the history and forms of marriage, errors in wedlock, the man's part, the woman's part, relations of prostitution and venereal disease to social progress, and birth control constitute the main topics of discussion. "Social hygiene preserves and strengthens the family as the social basis by adapting the human sex factor to individual health and character, societal good and a happy and wholesome social life." An important motive of the author is to guide the woman in the selection of a mate.—*R. C. Travis* (Western Reserve).

4573. Phelan, G. B. Psychology and ethics. *Proc. 4th Ann. Meeting Amer. Cath. Phil. Asso.*, 1929, 45-61.—(Courtesy *Social Science Abstracts*).

4574. Piechowski, P. Die Seele des Proletariats. (The mind of the proletariat.) Karlsruhe-Rüppur: Verlag der rel. Sozialisten, 1928. Pp. 48. M. 0.70.—*A. Römer* (Leipzig).

4575. Richard, G. Nouvelles tendances sociologiques en France et en Allemagne. (New sociological tendencies in France and Germany.) *Rev. internat. Sociol.*, 1928, 36, 647-669.—Many regard sociology as a theory of primitive society, but it is difficult to secure adequate data from primitive ethnology for the construction of a sociology. Consequently many sociologists fall back upon the dangerous expedient of analogy. Such is the method of Levy-Bruhl's theory of a primitive pre-logical mentality. As a matter of fact, Levy-Bruhl studied mainly relatively advanced peoples and few truly primitive people. Also he failed to make use of the data of travellers in the fifteenth and sixteenth centuries. He does not go back of 1825; he jumbles his facts. Furthermore, it is wrong to regard the existing savage as a true representative of the primitive man. Modern savages have been transformed by war, the chase, and magic. They cannot reveal the psychology of the primitives. Likewise, Durkheim's theory of collective representations errs in building up a sociology on collective rather than individual psychology. This fact comes out in accounting for the origin of scientific explanations. Neither the theory that science grew out of an empirical technology nor that it is the transformation of primitive magic is correct. It is the result of individual effort to analyze facts. It began in the Socratic reform among the Greeks. Science is the crown of the personal life, of free thought, not of the collective mind. Consequently sociology cannot be a science of beliefs. Collective thought is capable of certitude, but sociology must depend on verification rather than on dogma. Bergson's theory of the discontinuity of history is better adapted to a sound

sociology than are the theories of Levy-Bruhl and Durkheim. Creative mentality organizes the concept of society and gives a basis for a philosophy of history which explains and corrects the social psychology of Levy-Bruhl and Durkheim. This sociology on its static side deals with institutions and in its dynamic aspects is concerned with the affective life in the development of civilization. Thus the theories of Levy-Bruhl give way to a better informed ethnology and those of Durkheim to psychology and the history of ideas. The resulting social psychology is called upon to render aid to ethnography, to history, to psychology, but without prejudice to the new sociology. (Discussion of works by Olivier-Leroy, Allier, Essertier, and Lasbax.)—(Courtesy *Social Science Abstracts*).

4576. Römer, A. Die direkt persönliche Note in den Antworten der Versuchspersonen. (The direct personal note in the answers of observers.) *Zsch. f. Religionspsychol.*, 1929, 2, 69-80.—From the author's own experiments.—A. Römer (Leipzig).

4577. Schneider, C. Die Gefühlslehre der gegenwärtigen Psychologie und ihre Bedeutung für die Religionswissenschaft. (Contemporary theories of feeling and their significance for the science of religion.) *Christ. u. Wiss.*, 1929, 5, 185-209.—A. Römer (Leipzig).

4578. Schrader, —. Jesu Seelsorge und die moderne Psychotherapie. (Jesus' care of souls and modern psychotherapy.) *Mecklenburgisches Kirchen u. Zeitblatt*, 1929, 57, 153-159.—A. Römer (Leipzig).

4579. Schweitzer, C. Apologetik, Psychotherapie und Seelsorge. (Apologetics, psychotherapy and pastoral care.) *Reinhold-Seeberg-Festschr.*, 1929, 2, 59-75.—A. Römer (Leipzig).

4580. Turin, L. Dr. N. Roubakine on biblio-psychology. *Psyche*, 1929, 9, 74-93.—The name of Roubakine is a household word in Russia, since he has done more than any other man in that country to propagate popular knowledge. According to this leader, bibliographical psychology is "the psychology of the business of books in the process of its evolution and dissolution under given considerations of social environment, time and space." It must consequently study types of persons engaged in making books, their psychological peculiarities, the effects upon readers, and the social environment in which the books are produced. Certain laws are at the basis of biblio-psychology, viz.: the law of the mneme, the composition of the mneme, the law of the action of words, emotional consonance and dissonance, the approach of the reader-listener relation, and the law of economy of time and energy due to psychological and sociological resemblances. These fundamental principles induce Roubakine to demand reforms in the realm of the study of books.—T. R. Garth (Denver).

4581. Weber, H. Musik und religiöses Erleben. (Music and religious experience.) *Unitas*, 1929, 69, 57-61.—A. Römer (Leipzig).

4582. Westermarck, E. Marriage. New York: Cape & Smith, 1929. Pp. 115. \$1.50.—A brief dis-

cussion of the origin and history of different types of marriage, and of marriage customs. Exogamy is explained as resulting from a natural biological aversion. The general object of marriage rites is to give publicity to the union; they also aim to ward off the danger attendant upon entering a new state. The respective advantages of monogamy and polygyny are stated and the prediction made that the former will persist. Divorce should be regarded as a means of preserving the dignity of true marriages by eliminating others. The institution of marriage will endure as long as, and no longer than the sentiments upon which it is based.—M. P. Montgomery (Fairbault, Minn.).

4583. Wildfeuer, G. Die religiöse Innenwelt des Industriearbeiters. (The inner religious world of the industrial worker.) Leipzig: Gräfe, 1929. Pp. 66. M. 1.80.—A. Römer (Leipzig).

4584. Wissler, C. The conflict and survival of cultures. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 786-808.—The anthropologist's interest in the formal behavior and precepts of the community as a whole is contrasted with the psychologist's interest in the individual's reaction to them. Among primitive people the social life is centered around the community which in turn is a part of the tribe. Each tribe has its cultural patterns. It is the individual's reactions to these that interest the psychologist. New and often conflicting cultures may be introduced to a tribe quite incidentally, by direct conscious borrowing from emulated tribes, or be forced upon it by a more powerful cultured community. The latter method was used on the American Indians. It leads to great emotional conflicts. Bibliography.—M. B. Mitchell (Yale).

4585. Wright, H. W. Metaphysical implications of human association. *Phil. Rev.*, 1929, 38, 54-68.—(Courtesy *Social Science Abstracts*).

4586. Wyndham, H. Criminology. New York: Cape & Smith, 1929. Pp. 105. \$1.50.—A popular work based on English methods of handling crime, with constant reference to the historical background. These methods grow out of the two schools of criminology: (1) the classical, which studied crime as an abstraction and held that all conduct was the result of free will, and (2) the positive, which studies the genesis of crime and aims to construct a system of criminal sociology. The emphasis of the book is on the reduction of the number of capital felonies (200 in 1819), and on the differentiation between "guilty" and "guilty but insane" criminals. The 1922 legal definition of insanity was that a person of defective mind could not be held guilty of a criminal act "if the defect prevented him from knowing that the act was wrongful, or from controlling his own conduct." The newest methods are concerned with habitual criminals, who are held in preventive detention; the juvenile delinquent, who now has his own court and industrial schools, and for whom the parole system has been developed; and the first of-

fender, who is often given suspended sentence.—*E. B. Heim* (Price, Utah).

[See also abstracts 4390, 4400, 4468, 4504, 4513, 4596, 4598, 4601, 4605, 4606, 4609, 4610, 4611, 4671, 4672.]

INDUSTRIAL AND PERSONNEL PROBLEMS

4587. **Burt, H. E.** *Psychology and industrial efficiency*. New York: Appleton, 1929. Pp. xviii + 395. \$3.00.—A non-technical discussion of the main aspects of industrial psychology considered from the practical point of view of the young executive or engineering student. The first two chapters open with problems with which one is confronted when a new employee or worker first comes to the factory or to the office. An elementary discussion of the fundamental laws of learning introduces the reader to the problem of training apprentices, and the use, in a general way, of various auxiliary devices for instruction, such as the motion picture or the vestibule school. In Chapter III the discussion of more specific methods of work includes that of economy of movements, arrangement of material, individual differences, rhythm, group activity, etc. The problems of fatigue and monotony are taken up in Chapters IV and V. Posture, noise, special tools, work hours, and especially the problem of rest periods, are discussed. The alleviation of monotony through more effective selection, and some experimental attempts at detecting susceptibility to monotony are described in the fifth chapter. The effects of working environment, especially illumination, temperature and ventilation, are covered in Chapter VI. Chapter VII stresses the question of satisfaction and morale among employees resulting from such elements as the nature and attractiveness of work, the relationship between foreman and workers, employers and employees, etc. Accidents during work are briefly discussed in Chapter VIII in their functional relationship to conditions of work, fatigue, intelligence, information, "emotional hangover," etc. Chapter IX discusses, in an elementary way, such psychological problems as that of attention, memory, habit formation, etc. The final Chapter X gives a brief discussion of the future of industrial psychology, stressing the need for further psycho-psychological research in cooperation with the industrial engineer. The bibliography, given in the form of footnotes, contains some 175 books and articles, including those of 1928.—*D. L. Zys* (New York City).

4588. **Haide, C.** *Ermüdung und Arbeitszeit als Unfallveranlassung*. (Fatigue and working hours as causes of accidents.) *Reichsarbeitsblatt*, 1928, 8, 157-158.—Data for the years 1926 and 1927 gathered in certain steel, sheet and tube mills, with divisions for stills and tanks, employing in all about 3,000 men, show an accident frequency rate slightly higher for Wednesday than for Friday, and higher for the middle of a twelve-hour working shift than for either end. The major peak is after six working hours, and the minor after eight. The practical conclusion is that the foremen must be particularly on the alert during the hours of greatest fatigue. Persistent education of the working force must

bring about a change. The times of greatest accident frequency are the times characterized not only by the greatest fatigue but also by the greatest intensity of effort. Other points to be considered are the places of accident, the psychology of the workers, their personal well-being, the temperature, effect of the introduction of new workers into the force, etc. The author has occasion day by day to meet those who have hurt themselves and to instruct them, but in spite of all admonition and propaganda the same kinds of accidents recur. There is a minimum accident limit below which it is most difficult to go.—(Courtesy *Social Science Abstracts*).

4589. **Hoffmann, W.** *Die Psychologie der erwerbstätigen Jugend und ihre Bedeutung für die Arbeit in den Berufsschulen*. (The psychology of juvenile employment and its significance for work in vocational schools.) *Erziehung*, 1929, 4, 469-485.—*A. Römer* (Leipzig).

4590. **Roloff, H. P.** *Ueber Eignung und Bewährung. Forschungen zur industriellen Psychotechnik*. (Concerning aptitude and validation. Studies in industrial psycho-technology.) *Beihefte z. Zsch. f. angew. Psychol.*, 1928, No. 41. Pp. 148.—The chief engineers of three large industries selected, from among their apprentices, a number of men whom they could rank, in approximately equal steps, in order of merit or of value to the concern. These three groups (8 to 12 men in each) were given an extensive series of sensory-motor and intelligence tests. The tests, scoring, and weighting of scores are fully described. The individuals of each group were then ranked according to their scores (1) in the severe tests, and (2) in various combinations of the tests; correlations between these rankings and those furnished by the industrial heads were computed. In general, the combination of all tests gave the best correlations with the factory rankings (.78 to .86). The combined sensory-motor tests gave poorer correlations (.59 to .82) than did the battery of intelligence tests (.73 to .83). Although a high correlation is generally found between sensory-motor and mental test scores, the author concludes that the prognostic value of a test depends upon the number, diversity, and complexity of reactions required by it; such a test should not confine itself to elements similar to, and as simple as, those contained in the routine of work in which the testee intends to engage. The importance of carefully observing the subject during administration of the tests is stressed. In section 7 of the monograph, "the attempt is made to derive a quantitative determination of the care or scrupulousness with which a given piece of work is done from four exactly and objectively measurable factors: quality, speed, specific aptitude for the work, and the personal psycho-physical tempo of work."—*H. W. Nissen* (Yale).

4591. **Schindler, R.** *Das Problem der Berufsauslese für die Industrie*. (The problem of vocational selection in industry.) Veröffentlichung No. 32 des Reichskuratorium f. Wirtschaftlichkeit. Jena: Fischer, 1929. Pp. 62. M. 1.50.—The Reichskuratorium für Wirtschaftlichkeit intends, by the above publication, to introduce the human factor

into technical, economic and commercial programs. The Kuratorium considers that vocational selection is the best means of achieving this end. The author divides his book as follows: (1) the place of vocational selection in economic and social politics; (2) the ways of carrying out vocational selection; (3) the evaluation and critical consideration of these ways; (4) the conclusions which are to be drawn from this exposition. An extensive bibliography is added. Schindler considers that the task of vocational selection is the harmonization of the worker's inclination and economic position with the objective vocational requirements. In this way he wants to bring about the substitution of the skilled laborer for the unskilled one, and to place the skilled laborer in such a position that he is assured of the maximum economic and ideal advantages. The author regrets that in Germany public vocational guidance is very little developed and that therefore the industrial problems of vocational selection are very seldom solved. But until these conditions are removed the measures taken by the industries themselves are fully justified. That along with his fundamental approval of the principle of vocational selection the worker interests himself more in measures for public vocational guidance is due to the fact that the latter lack the negative selective character of the psycho-technical tests in industry, which is very injurious to the individual.—O. Seeling (Berlin).

4592. Suter, J. *Fortschritte auf dem Gebiete der psychologischen Dienstleistung.* (Progress in the field of psychological service.) *Psychol. Rundschau*, 1929, 1, 12-15.—A. Römer (Leipzig).

4593. Walther, L. *Come la psicotecnica possa riorganizzare un'industria.* (How psychotechnology can reorganize an industry.) *Riv. psicol.*, 1928, 24, 197-216.—T. M. Abel (Sarah Lawrence).

4594. Walther, L., Ehinger, C., & Bovet, E. *Etude technopsychologique d'une industrie de produits alimentaires.* (A technopsychological study of a food products industry.) *Arch. de psychol.*, 1928, 21, 175-197.—In the course of this study the authors met with several important factors which on first sight apparently prevent an increase in output. However, the following method made it possible to overcome a number of these difficulties and to increase the output from 30 to 40%. The movements required for the operations in this industry, which was a hundred years old, were developed almost to perfection. The industry was also characterized by an advanced average age and by unfavorable social and economic conditions. The first research was designed to measure the manual dexterity of 230 workwomen in factories being reorganized. For this the authors used five tests (dotting, tapping, stringing beads, cutting figures, discs). The results of this study are: (1) The diagnostic value of these tests is high (high correlation with judgments of foremen). (2) From a comparison of the general level of ability in the factory with another group it can be concluded that the motor aptitudes of the employees begin to be impaired at 27 to 33 years of age, and that it is necessary to use these abilities sparingly. (3) The percentile tests

made it possible for the authors to select the average individuals (50th percentile), who served as a basis for time studies. In addition to the time study the reorganization of the job was concerned with the material used and the movements required. The authors attempted to obtain a natural and constant rhythm, one which could be reproduced automatically. The job thus standardized was then given to other workwomen. A study of fatigue showed quickly that the employees, habituated for a long time to varied work, suffered from the monotony of the work thus organized. In order to remedy this difficulty, which threatened to reduce the output, the work was kept in rotation, but individual work was replaced by the collective work of a group of 5 women. The women changed places among themselves within the group after a certain length of time.—M. R. Lambercier (Geneva).

[See also abstracts 4583, 4651.]

CHILDHOOD AND ADOLESCENCE

4595. Antipoff, H. *Observations sur la compassion et le sens de la justice chez l'enfant.* (Observations on pity and the sense of justice in the child.) *Arch. de psychol.*, 1928, 21, 208-214.—These observations were made on a boy between the ages of 3 and 9 years. The author observed the child's reactions to different events and readings. One of the characteristics of pity manifested by the child is a sort of dual attitude engendering sometimes pity, sometimes hatred. It seems that the child very early has an affective perception of justice, as if he possessed an elementary moral "structure," which might be innate, instinctive. Along with children who have a sadistic tendency and experience pure joy in the suffering of others and those with a masochistic tendency, who delight in living inwardly the sufferings of good and bad heroes, it seems that there ought to be place for a third type (the one found in these observations) of vindictive reaction. This reaction develops from a moral reaction which would take up the defense of the victims and correct the criminal in imagination by the penalty of retaliation.—M. R. Lambercier (Geneva).

4596. Baker, H. J., Decker, F. J., & Hill, A. S. *A study of juvenile theft.* *J. Educ. Res.*, 1929, 20, 81-87.—A study of convicted cases for theft in Detroit matched for age, grade and nationality of fathers, with a control group selected from the schools. There were 94 cases in each group. The factors showing no significant differences are economic status, father's occupation, size of family, position of boy among siblings, roomers or borders in the home, church attendance, health or injury, time in school, change of schools, school marks, work and earning power of the boys, and attendance at movies. The factors showing differences in favor of the control group were age of parents at the birth of their children, unbroken homes, lack of crowding in homes, general intelligence, supervision of play, correction of physical defects, suitable playmates, and church affiliation.—S. W. Fernberger (Pennsylvania).

4597. Chadwick, M. *Child-study, the modern hobby.* *Psyche*, 1929, 9, 69-72.—Parental mistakes

in bringing up children are often due to their own unconscious infantile, ungratified wishes as well as directly to the ways of the children themselves. The Oedipus conflict appears as a setting of the stage on the part of the father for the son, or the mother for the daughter, before the actual birth of either of the children. The father holds a grudge toward the child who will steal away the affection of the mother. Unconsciously he shows this after the birth of the child. Parental disharmonies, as jealousy and disappointment, are so poorly cloaked in family life that children easily sense them and are irrevocably impressed thereby. Some parents treat the education of their children as a hobby, relying upon authorities instead of themselves in child-rearing. Thus they are able to repudiate any responsibility for blame in the outcome. This is a disguised form of "exposing the infant," the destruction of a future rival.—*T. R. Garth* (Denver).

4598. Eng, H. *Kinderzeichnen vom ersten Strich bis zu den Farbenzeichnungen des Achtjährigen*. (Drawings of children, from the first line to the colored drawings of the eight-year-old.) *Beihfte z. Zsch. f. angew. Psychol.*, 1927, No. 39. Pp. 198.—The first section of this monograph contains a well-illustrated account of the scribbles and drawings produced by the niece of the author from her first to eighth year. The delineations show increasing degrees of complexity, accuracy, and wealth of detail with age. It is stated that the child was not tutored in drawing, and that its artistic endeavors were relatively uninfluenced by other children and by adults. The second section, "A survey of the development and psychology of children's drawings," presents an analytical study of the following factors: scribbling, pattern, automatisms, orientation, proportion, movement, perspective, color, and ornament. Theories and viewpoints of other authors are critically discussed. In the third section the writer points out how the drawings of children may be utilized in the construction of their psychographs; she concludes that such drawings can show us "how the will of the child grows in strength, from simple, automatic, nonsensical movements to complex, voluntary and purposeful acts," and that they mirror for us the feelings and interests of the child. In the fourth and final section, evidence is adduced to demonstrate the similarity between the drawings of children and those of primitive peoples. Bibliography of about 100 titles.—*H. W. Nissen* (Yale).

4599. Frankenheim, H. *Zur sittlichen Eigenwelt des Kindes*. (The individual moral world of the child.) *Neue Deutsche Schule*, 1929, 3, 1-9.—*A. Römer* (Leipzig).

4600. Furfey, P. H. *A selected bibliography on child development*. *Cath. Univ. Amer., Educ. Res. Bull.*, 1929, 4, No. 4. Pp. 51.—A very briefly annotated bibliography of 265 titles on the physical, mental and personality growth of the child. 12 general subtitles are given.—*R. A. Brotemarkle* (Pennsylvania).

4601. Gardner, E. *Public dance halls, their regulation and place in the recreation of adolescents*.

Washington, D. C.: Gov't Printing Office, 1929. Pp. 62. \$0.10.—*R. R. Willoughby* (Clark).

4602. Gesell, A. *The individual in infancy*. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 628-660.—Infancy is a very real and important part of the life series of man. It begins with a developmental zero at conception. For convenience in studying the life of the child the time up to twelve years has been divided into eight periods of increasing lengths from one week to six years. Various kinds of behavior patterns exhibiting themselves during these periods can be studied from different points of view as: a part of neurophysiology, by experimental analysis, psychometry, naturalistic observation, clinical study, comparative method, or by co-twin control. Some of the apparatus used for such studies at the Yale Psycho-Clinic are described. The range of infant behavior includes prenatal, perceptual, motor developmental, language, adaptive and learning, emotional and personality behavior. Maturation has been found to be fundamental in the development of the infant. It has been investigated through a study of prehension patterns, of correspondent behavior in identical twins even after one has been trained longer than the other, of children with physical handicaps, and of emotional behavior at various time intervals. The reader is reminded that the infant is an individual. Bibliography.—*M. B. Mitchell* (Yale).

4603. Gesell, A. *Maturation and infant behavior pattern*. *Psychol. Rev.*, 1929, 36, 307-319.—The behavior of the infant is obedient to pattern. Even the random movements of the month-old child are not utterly fortuitous. Normative studies of both premature and postmature infants have shown repeatedly that the growth course of behavior tends to be obedient to the regular underlying patterns of genetic sequence, irrespective of the irregularity of the birth event. Evidences of behavior maturation are drawn from experimental studies of: (1) the development of prehension, the studies showing that the refinement of eye-hand behavior comes not by the alleged utilization of snatches of successful random activity, but by the progressive acquisition and consolidation of a hierarchy of patterns which are the result of developmental increments and decrements rather than the stamping in or chaining of satisfying reflexes; (2) developmental correspondence of twins by the method of co-twin control which could not have arisen from some identical conditioning factor in the environment; (3) restricted influence of physical handicaps wherein the tendency of the organism to maintain an optimum behavior pattern again bespeaks the potency of maturational factors; (4) developmental progression in emotional behavior as against the sudden conditioning of emotional reactions in which genetic gradation is based upon maturational sequence rather than upon an historical sequence of extrinsic conditioning factors. The extreme versions of the conditioning theories suffer by explaining too much in suggesting that the individual is fabricated out of conditioning patterns which do not give due recognition to the inner checks

which set metes and bounds to the area of conditioning, and which prevent abnormal and grotesque consequences which the theories themselves make possible.—H. Helson (Bryn Mawr).

4604. Groves, E. R., & Groves, G. H. *Wholesome parenthood*. Boston: Houghton Mifflin, 1929. Pp. 320. \$2.00.—Certain problems of childhood are emphasized and "concrete suggestions helpful to mothers and fathers in their home practices" are presented. The parent should attempt to discover promising trends in the child's personality and to encourage them. "This policy steers away from interference, but accepts the responsibilities of guidance and of bringing to the child the conditions of growth." Chapters are devoted to the following topics: discipline, the conditioned reflex, habit, fear, anger, sex, money, inferiority feeling, emotional conflict, day-dreaming, fixation, introversion and extraversion, and adolescence. "In order that the parent may further study the problem in which he is interested, a few carefully chosen references are given at the end of each chapter." A 14-page index is included.—L. W. Gellermann (Clark).

4605. Illge, W. *Beiträge zur religiösen Werterlebensfähigkeit des Grundschulkindes*. (Contribution on the capacity of the elementary school pupil to experience religious values.) *Zsch. f. päd. Psychol.*, 1929, 30, 209-220.—Religious feelings seem to appear at about the ninth year. In religious experience the child becomes aware of his insufficiency, seeks contact with the all-powerful world of God, and attempts to form an idea of the power of God.—A. Römer (Leipzig).

4606. Kelchner, M., & Lau, E. *Die Berliner Jugend und die Kriminalliteratur. Eine Untersuchung auf Grund von Aufsätzen Jugendlicher*. (The youth of Berlin and literature of crime. A study based on essays written by young people.) *Beihefte z. Zsch. f. angew. Psychol.*, 1928, No. 42. Pp. 110.—The subjects, about 1,000 boy and girl students in vocational schools of Berlin, 14 to 17 years old, were instructed as follows: "Relate the most exciting story of crime which you know. Also list the titles of all such stories and 'movies' which you remember." An hour and a half was allowed for the task. The stories (or their authors), it was found, could be divided into four main types; (1) the dynamic, (2) the static, (3) the fantastic, and (4) the dispassionate. The propensity toward action on the part of the dynamic type and the suggestibility and uncritical attitude toward unrealities on the part of the fantastic type appear to make these two types especially susceptible to the dangers of crime literature. The sources of the stories—trashy magazines, newspapers, personal experiences, etc.—are analyzed. The frequency with which various kinds of crime are mentioned is tabulated. The motive of the crime is seldom mentioned in the stories; in order of decreasing frequency boys give avarice, cruelty, vengeance, and sex, whereas in the girls' stories the ranks of cruelty and sex, in this list, are interchanged. Women appear more frequently in the girls' stories than in those of the boys. The authors believe that their method, "the method of

the comparative study of essays," can be of considerable value in attacking various problems of social psychology.—H. W. Nissen (Yale).

4607. Kempf, G. A., & Collins, S. D. *A study of the relation between mental and physical status of children in two counties in Illinois*. *U. S. Pub. Health Reports*, 1929, 44, 1743-1784.—Mental and physical examinations were given to about 5,000 children of two counties in Illinois. The Otis primary test was used for grades 1-3; Haggerty for grades 4-8; and individual Binet when necessary. The mental status is discussed in relation to school success, sex, discipline, race, urbanization and economic status. These results agree, in the main, with those of previous studies. The relation found between the presence of physical defects and mental ability may be stated: "The association of physical defects with IQ does not seem to be of a specific character which shows up in any specific group of defects, but rather of a general nature which expresses itself in a slightly higher rate for a number of different defects," in inverse ratio to the IQ. No significant correlations were found between the IQ and physical growth.—C. M. Louttit (Hawaii).

4608. Lesch, E. *Bericht über den vierten Kongress für Heilpädagogik in Leipzig, 11.-15. April 1928*. (Report on the Fourth Congress for Therapeutic Pedagogy at Leipzig, April 11-15, 1928.) Berlin: Springer, 1929. Pp. viii + 444. M. 19.60.—Besides papers on genetic psychology in general by Kafka (Dresden) and Kreuger (Leipzig), papers by Hans Volkelt on the perception and reproduction of forms in children and by Schulte on the pedagogical influence of gymnastic exercises fall in the field of normal psychology. Experiments in perception of form with feeble-minded children by Sanders (Leipzig) and Schwab (Bonn) belong in the pathological field. The general psychopathological questions of pediatrics were treated in papers by Schröder (Leipzig), on the concept of psychopathology in children; Ranschburg (Budapest), on debility, etc.; Meltzer (Grosshennersdorf), on the birth trauma; Huldshinsky (Charlottenburg), on relations to rickets; and Jacobi (Stadtroda), on encephalography. The necessity of institutional treatment, especially early treatment, was discussed by Grage (Chemnitz), R. A. Pfeifer (Leipzig), Bartsch (Leipzig), and Brendel (Bräunsdorf). The largest group comprised papers on educational problems in institutions and the teaching of abnormal children in general: Henze (Frankfurt), Knauth (Kleinmeusdorf), Eyfert (Jena), Schmidt (Magdeburg), Villinger (Hamburg), Kahlbaum (Görlitz), Hanselmann (Zürich), Böttger (Leipzig) and Gürtler (Chemnitz-Altendorf). Katz (Rostock) presented conversations with feeble-minded children. Gregor (Flebingen) and Rosenbaum (Leipzig) spoke on the feeding of the school child. Bessau (Leipzig) spoke on epidemic infantile paralysis, F. Stern (Göttingen), Kürbitz (Chemnitz) and W. Lange (Chemnitz) on epidemic encephalitis. Winkler (Berlin-Dahlem) presented pictures of exceptional children; Löwenstein (Bonn) spoke on psychological investigations of twins. Wiesner (Wien) spoke

on the success of treatment with Röntgen rays. St. Krauss (Heidelberg) and Lazar (Wien) discussed the unsocial behavior of abnormal children; Des-sauer (Niederschönenfeld), Többen (Münster), Closs-termann (Bonn), and Lesemann (Hannover) discussed the relation to punishment procedures and the care of the discharged; Fürstenheim (Frankfurt), Klemm (Leipzig), Giese (Stuttgart), Inhoven (Düsseldorf), and Moses (Mannheim) discussed vocational testing and the choice of a profession for abnormal persons. The honorary chairman of the society, Th. Heller, to whom the report is dedicated on the occasion of his sixtieth birthday, discussed an atypical language development. Schreiner (Budapest) and Kürbitz (Chemnitz) spoke on the education of the blind, Taube (Schleswig), Wegwitz (Leipzig), Schumann (Leipzig) and R. Lindner (Leipzig) spoke on deaf and dumb children, and Herold (Leipzig) on crippled children.—W. Wirth (Leipzig).

4609. Macanlay, E. Some notes on the attitude of children to dress. *Brit. J. Med. Psychol.*, 1929, 9, 150-158.—In two elementary schools in Exeter, 122 girls and 183 boys between the ages of 6 and 15 were asked to write short essays on (1) the kind of clothes they would like to wear to a party and why, (2) the kind of clothes they would like to wear everyday and why, and (3) the kind of clothes they dislike and would do without if they could and why. From these essays it was seen that children up to nine years of age are interested primarily in color. From ten to twelve there appears an interest in decoration and design, together with an increasing interest in variety of hue and a decreasing interest in brightness and saturation of color. With increasing age the dictates of fashion and convention become increasingly important. During adolescence there is a sublimation in which clothes replace the body. Modesty is so very strong among the girls of the lower social classes that even though they complain of the discomforts of excessive and tight clothing they do not believe it possible to dispense with it. A very large per cent of both boys and girls find their clothing tight, rough, and too hot.—M. B. Mitchell (Northampton State Hospital).

4610. Mead, M. Samoan children at work and play. *Natur. Hist.*, 1928, 28, 626-636.—Samoan families are not made up of father, mother and children, but of groups of 15 or 20 relatives. Children may choose homes with relatives rather than their parents. Names are changed often at the whim of companions or by choice of the growing children. Mothers give little care after babies learn to crawl. Children five or six years old spoil and pamper the babies until they in turn become nurses. Boys are turned over to the rough discipline of older companions, and at ten are sturdy well-behaved youngsters. The smallest children are given tasks such as sweeping the floor, picking up scraps and running errands. There are no fairy tales or make-believe in the lives of the young, they are engaged in fishing, paddling canoes, singing, and dancing, much as are their elders. However, children under 15 or 16 are expected always to be seen, not heard, and to have

no social standing in the community. Exceptional ability or precocity is apt to be met with severe scolding or even whipping. Elders hide nothing from the young, and "children grow up acquainted with the rhythm of life and death, accepting life as simply and unrebellingly as do their parents."—(Courtesy *Social Science Abstracts*).

4611. Nobiling, E. *Der Gottesgedanke bei Kindern und Jugendlichen. Ein Beitrag zur religiösen Psyche des 10.-20. Lebensjahres.* (Thoughts of God in children and adolescents. A contribution to the religious psychology of 10- to 20-year-olds.) *Arch. f. Religionspsychol. u. Seelenführung*, 1929, 4, 43-216.—A. Römer (Leipzig).

4612. Payne, G. H. *The child in human progress.* (New ed.) New York: Sears, 1929. Pp. 400. \$2.50.—A history of the treatment of children among primitive and civilized peoples from the earliest times to the present. Infanticide, sacrifice of the first born, cannibalism, sale into slavery, exposure, and primitive birth control are described and profusely illustrated.—W. C. Poole (Worcester, Mass.).

4613. Popenoe, P. *The foster child.* *Scient. Mo.*, 1929, 29, 243-248.—Records of placement agencies support the view that traits of personality and conduct are much more subject to outside influence than are traits of intellect or physique. Some of the recommendations offered in the matter of adoption are: seek good ancestry; take the child as young as possible; adopt on trial; do not conceal the fact of his adoption from the child later.—J. F. Dashiell (North Carolina).

4614. Rombach, J. *Das soziale Verhalten des Siebenjährigen.* (The social behavior of the seven-year-old child.) *Zsch. f. angew. Psychol.*, 1928, 30, 369-429.—Entering school has often been considered the turning-point in the life of the child. This report, on the observation of first grade pupils, prepared under the auspices of the University of Freiburg, is not a study in educational psychology but an analysis of the problem of socialization of 40 newly entered children. Contrary to common opinion, the "group in the making" is a process that advances slowly, as may be deduced from the following observations: The first associations, which are a survival of neighborhood and other interests, quickly disappear; the teacher, rather than fellow pupils, is the center of interest; tattling is motivated by the desire to court the teacher's attention; mutual assistance and lending of materials is reluctant; only at the close of the year does class consciousness appear. Recognition of rank, merit and leadership, however, appear early.—(Courtesy *Social Science Abstracts*).

4615. Sacristan, J. M. *Técnica del psicoanálisis infantil.* (Technique of child psychoanalysis.) *Rev. de ped.*, 1929, 92, 337-342.—The psychoanalysts use a somewhat different technique in the treatment of neurotic children from that used in the analysis of the subconscious life of the neurotic adult. The child should not be allowed to realize that he is neurotic. The first essential step in the treatment of the child is to get his confidence. The child analyst succeeds in raising to consciousness the material

which has been repressed into the unconscious through dream analysis, a study of fantasies and daydreams, and an analysis of random free drawing. Despite the fact that free association lies at the very basis of psychoanalysis, a child of seven or eight years of age cannot be expected to throw much light upon the nature of his disorder by its use. The basis of child analysis, as of adult analysis, lies in transference. The neurosis of the adult is caused by the play of three factors, the unconscious urges, the ego, and the super-ego; the neurosis of the child lies in the conflict of the same forces. The object of the child analyst is first, to analyze, and second, to educate.—*J. W. Nagge* (Chicago).

4616. **Santafé, F. C.** *Los juegos infantiles.* (Children's play.) *Rev. de ped.*, 1929, 92, 343-351.—*J. W. Nagge* (Chicago).

4617. **Tobie, H.** *Die Entwicklung der teilinhaltlichen Beachtung von Farbe und Form im vorschulpflichtigen Kindesalter.* (Development of the selective regard of color and form during the preschool age.) *Beihfte z. Zsch. f. angew. Psychol.*, 1927, No. 38. Pp. 103.—Applying a modification of the method employed by Katz (1913) to determine whether children respond more readily to color or form, Tobie, using about 1,000 subjects, arrives at results and conclusions differing significantly from those of the earlier writer. The child is required to select, from an array of different forms each of which may appear in several colors, those which are "like" the form, of a specific color, displayed by the experimenter. The recorded choices show whether color alone, form alone, or the correct combination of both factors determined the selections made by the child. The chief modification of method introduced in the present study is the use, not only of geometrical forms, but also of forms (outlines) of familiar objects. The principal conclusions may be briefly summarized as follows: (1) Up to age 3 years 8 months the relative objective obtrusiveness of color and form determines to which of these factors the child will respond, i.e., which of them will be "abstracted." Central factors are of negligible importance at this age. (2) In the age range 3 years 9 months to 5 years 1 month, the child tends to respond to color rather than to form. This tendency is based on constitutional factors. In the last months of this age range the "color zone" gives way to a period in which form is heeded more frequently. (3) With age 5 years 2 months a developmental phase begins in which, with increasing intellectual development, the ability to respond selectively to either form or color appears.—*H. W. Nissen* (Yale).

4618. **Weigl, F.** *Vom subjektiven Gewissen der Sechs- und Siebenjährigen.* (The subjective conscience of the six- and seven-year-old.) *Pharus*, 1929, 20, 104-112.—*A. Römer* (Leipzig).

[See also abstracts 4558, 4643, 4660, 4675.]

EDUCATIONAL PSYCHOLOGY

4619. [Anon.] *Report of committee on terminology in the measurement of physical education, with special reference to classification.* *Amer. Phys.*

Educ. Rev., 1929, 34, 393-405.—Contains definitions of statistical terms, anthropometric instruments and testing terminology.—*R. Stone* (Lehigh).

4620. **Archer, C. P.** *Saving time in spelling instruction.* *J. Educ. Res.*, 1929, 20, 122-131.—From experimental work with 1,000 children in 30 school systems in Iowa and Minnesota, it was found that there is a great deal of transfer of knowledge about certain word endings from words studied to those not studied, and for both difficult and easy words. There were no differences in this transfer ability for boys and girls or for the 5th and 7th grades. Intelligence, as tested by the Haggerty Intelligence Examination, Delta I, was not a factor in the transfer. The transfer occurred in proportion to similarity of material.—*S. W. Fernberger* (Pennsylvania).

4621. **Banker, H. J.** *Correlation studies of the student's ability index.* *J. Educ. Res.*, 1929, 20, 31-37.—Results of an Otis Classification Test made on 342 students whose ability index was discussed in a previous article. The correlations of the student's ability index with the Otis test results give $r = 0.825$. The correlation of teachers' marks and the ability index gives $r = 0.955$.—*S. W. Fernberger* (Pennsylvania).

4622. **Barr, A. S.** *Characteristic differences in the teaching performance of good and poor teachers of the social studies.* Bloomington, Ill.: Pub. School Publ. Co., 1929. Pp. viii + 127. \$1.25.—The report of an investigation undertaken (1) to test certain theories regarding objective classroom supervision, (2) to inquire into the characteristic qualitative and quantitative differences between good and poor teachers of the social sciences in the junior and senior high schools, and (3) to study in a general way the causes of success and failure in teaching. Bibliography of 19 titles.—*F. A. Geldard* (Virginia).

4623. **Bock, A.** *Die Krisen im Leben des Studenten.* (Crises in the life of the student.) *Erziehung*, 1929, 4, 485-500.—*A. Römer* (Leipzig).

4624. **Brewer, J. M., & others.** *Cases in the administration of guidance.* New York: McGraw-Hill, 1929. Pp. xvi + 304. \$2.50.—This group of situations related to educational and vocational guidance is planned with reference to use as a textbook in graduate courses in the subject. The four parts of the book deal respectively with educational guidance, vocational guidance, the personnel and equipment for guidance, and plans for educational and vocational guidance. It is recommended by the author that the principles outlined in this book be used in working out solutions for the author's *Case Studies in Educational and Vocational Guidance* (Ginn and Co., 1926).—*D. W. Jensen* (Central Michigan State Teachers College).

4625. **Burrow, M. A.** *The special school as an Americanization factor in the community.* *Tr. School Bull.*, 1929, 25, 134-140.—This is a continuation of a report of the former pupils of the State Street Binet School in Newark, N. J. "The aim of our work is to train the defective children better how

to work and better how to live in the community where they will have to work and live." The report is gratifying.—*E. M. Achilles* (Columbia).

4626. **Buswell, G. T.** Summary of arithmetic investigations (1928). II. *Elem. School J.*, 1929, 29, 737-748.—*P. A. Witty* (Kansas).

4627. **Carreon, M. L., & Ramos, P.** Educational research. *Philippine Pub. Schools*, 1929, 2, 189-191.—Reports the results of music tests given to students of normal schools and to teachers of elementary schools.—*L. W. Gellermann* (Clark).

4628. **Chapin, F. S.** Extra-curricular activities at the University of Minnesota. Minneapolis, Minn.: Univ. of Minnesota Press, 1929. Pp. vi + 140. \$2.00.—Sources of material for this study are: (1) 4,637 questionnaires filled out by undergraduates (65% of the student body); (2) 151 questionnaires filled out by campus organizations; and (3) 408 questionnaires filled out by alumni. Copies of these three questionnaires are included in appendixes. Material based upon the data obtained from these questionnaires is presented concerning the following topics: extra-curricular organizations, student participation in different types of activity, distribution of students by number of activities, participation of student leaders, student activity and academic achievement, time students spend on activities, and the carry-over of student activities into corresponding community activities of alumni. Some conclusions of the study follow: "Upper-classmen are more active than under-classmen, and women are, in general, more active than men." "... one-third of the students report that they do not participate in any extra-curricular activity on the campus." "... the period of greatest concentration of activities is in the senior year." "The average prominent student engages in three different activities as compared with the one campus activity in which the 'average' student participates. The honor students better this record, as four for men and five for women represent the average numbers of campus activities in which the honor students take part." "It is apparent, at least, that students may take part actively in extra-curricular affairs without great sacrifice to academic standing." "... 63.6 per cent of the alumni consider that extra-curricular activities have equal or more value than classroom work that requires the same amount of time." "In final conclusion ... the results ... all seem to point to the fact of social and educational values inhering in and accruing from extra-curricular activities." Suggestions for further extra-curricular studies and an annotated bibliography of 76 titles are included.—*L. W. Gellermann* (Clark).

4629. **Constance, C. L.** Greeks of the campus. *School & Soc.*, 1929, 30, 409-414.—The fraternity and non-fraternity freshmen at the University of Oregon during 1927 and 1928 were compared on the basis of preparatory-school record, score on the American Council on Education test, and the average number of grade points per hour of university work carried during the first term. In general, the fraternity freshmen rated about the same as the non-

fraternity freshmen on the basis of the psychological test score, were inferior to the latter in grades earned in high school, but secured better grades in the university. The sorority freshman group showed the same relationships relative to the non-sorority, except that the former ranked considerably higher than the latter in mental test performance. The author feels that his analyses suggest that the influence of the social organizations is directed more to the encouragement of students with low ability than to the stimulation of those who developed habits of loafing in high school.—*H. L. Koch* (Texas).

4630. **Darsie, M. L.** Training teachers for work with atypical children. *J. Juv. Res.*, 1929, 13, 231-235.—The author outlines a four-year university course for training teachers for work with atypical children.—*H. L. Koch* (Texas).

4631. **Davis, R.** Tests in English fundamentals. New York: Ginn, 1929. Ser. 1-4. \$0.80.—"These tests are of the achievement type and somewhat of the nature of the so-called new-type examinations." There are four divisions: (1) parts of speech, (2) phrases, clauses, and sentences, (3) punctuation and capitalization, and (4) general grammar and punctuation.—*M. Goodrie* (Clark).

4632. **Edgerton, H. A., & Toops, H. A.** Academic progress; a follow-up study of the freshmen entering the university in 1923. *Ohio State Univ. Stud., Contrib. in Admin.*, No. 1. Pp. 150.—The study concerns what happened, academically, to a class of 1,958 English-speaking students during the first four years after their entrance to college. Problems discussed include: persistence, elimination, number graduating, transfer, entrance conditions in high school subjects, prediction of equality of college work, prediction of persistence, relative accomplishment of students of various degrees of intelligence. The data are presented for the colleges of agriculture, arts, commerce, education, engineering, and pharmacy, separately, and also in a summary chapter to facilitate inter-college comparisons. Three additional studies are to follow in which other factors will be considered.—*L. W. Gellermann* (Clark).

4633. **Elliott, H. S.** Mental hygiene and religious education. *Rel. Educ.*, 1929, 24, 616-618.—Mental hygiene contributes to religious education both a point of view and a methodology. Bad conduct is a symptom of personality ill-health and is derived from a bad environment. To effect a cure it is necessary to eliminate the unfortunate influences and reconstruct habits.—*J. P. Hylan* (Stoneham, Mass.).

4634. **Ellwood, J. K.** Forming correct language habits; manual. Boston: Meador, 1929. Pp. 173. \$1.00.—This book is accompanied by three pads, priced \$0.25 each. The first third of the manual is devoted to a presentation of the psychology of habit, with special reference to language habits. The remainder of the manual contains 160 language exercises, with suggestions and instructions to the teacher for giving them. The first 50 exercises are for use in the first grade, after the children have learned to write; the remaining 110 are designed for

use in the second grade. By the end of the third exercise pad the pupil is expected to have learned the use of capital letters, the question-mark, the sign of the possessive, the period, the comma in certain situations, paragraph indention, the margin; he should know how to use the dictionary, to write an interesting paragraph, to write a compact sentence, and to tell where a sentence begins and ends.—*L. A. Averill* (Worcester Normal School).

4635. *Garrison, S. C., & Garrison, K. C. The psychology of elementary school subjects.* New York: Johnson, 1929. Pp. xx + 569. \$2.00.—The book is designed for elementary school teachers, both in training and in the field. A groundwork in general psychology is taken for granted, though two basic chapters are given, one on individual differences, and one on causes of individual differences. The book deals with the science of psychology as applied to school situations: measuring, learning, special abilities and disabilities, and motivation; with the psychology of the teacher—her function and essential characteristics; and with the psychology of school subjects: language, reading, spelling, handwriting, arithmetic, drawing, music, the social studies, and nature study.—*M. B. Jensen* (Central Michigan State Teachers College).

4636. *Gates, A. I., & Brown, H. Experimental comparisons of print-script and cursive writing.* *J. Educ. Res.*, 1929, 20, 1-14.—In Grades one to six inclusive in a Manhattan public school, experimental teaching was carried on by the regular teachers for a period of four months. The relative ease of learning print-script and cursive writing during the first year was studied. Systematic training was given in print-script in comparison with incidental learning of cursive script. A comparison was made for speed of production and for interest in the two forms. The effects of changing from print to cursive script were noted. It was found that print-script was learned much more rapidly than cursive script during the first half year; however, the difference in quality was slight. Print script was speeded up to the grade norms of Grades three to six by practise, and was well liked by pupils, especially those in the lower grades. On the other hand, cursive writing was found to be more rapid for the upper grades, even though there had been intensive practise with print-script.—*S. W. Fernberger* (Pennsylvania).

4637. *Gault, R. H. Discrimination of homophenous words by tactual signs.* *J. Gen. Psychol.*, 1929, 2, 212-230.—Homophenous words, to the number of 305, were taken for study; they fell into 102 groups of two, three, etc. An attempt was made to discover how accurately four deaf subjects, after a definite amount of preliminary drill, can discriminate the members of a group by lip-reading (40 trials); and how accurately they can discriminate the same words by touch alone when the speaker is out of sight in an adjoining room (40 trials). In only eight groups did the subjects as a whole fail to make a better record by tactual cues alone than by visual cues alone. Of the 389 subjects there were only 80 who did not make a better record by touch than by vision. Approximately one-fifth of the total

number of groups is responsible for approximately one-half of the exceptions. 10 tables.—*H. Cason* (Rochester).

4638. *Hypes, J. L. The social distance score card as a teaching device.* *Soc. Forces*, 1928, 7, 234-237.—A social distance score card has been devised as a teaching device for classes in sociology. The students are asked to record their attitudes toward members of other races, beliefs, religions, economic or culture groups or groups differing in other ways. The card indicated 12 social relationships ranging from marriage to casual acquaintanceship. For each relationship it is possible to record an attitude ranging from one extremely negative (—10) through neutrality to one extremely favorable (+10). By connecting the 12 points a profile of the student's prejudice may be obtained. By use of such a card, the class may be led from the immediate and concrete to an understanding of general abstract principles.—(Courtesy *Social Science Abstracts*).

4639. *Kelly, R. L., & Anderson, R. E. Great teachers and some methods of producing them.* *J. Educ. Res.*, 1929, 20, 22-30.—Report of a questionnaire sent to 162 college executives. The results show that a large percentage of the teachers chosen as "great" in their institutions did not have a doctorate. The rank order for subjects is: science, ancient languages, English, mathematics and philosophy. Of the qualities necessary for this sort of "greatness" the rank order is interest in students and sympathy, scholarship and personality.—*S. W. Fernberger* (Pennsylvania).

4640. *Klein, A. J. Education.* *Amer. J. Sociol.*, 1929, 34, 1140-1154.—The national Bureau of Education during 1928 made a study of negro universities and colleges and one of land-grant colleges. The success of these surveys led to the undertaking of a country-wide study of secondary education. Adult education has received stimulus from Thorndike's studies of the learning ability of adults.—*E. R. Groves* (North Carolina).

4641. *Knauer, A. Die Hilfsschule, ihr Begriff und schulorganisatorischer Ort, ihr Schülermaterial und seine Auslese.* (The auxiliary school; its concept and place in school organization, its pupils and their selection.) *Hilfsschule*, 1929, 22, 321-345.—The author regrets that the theoretic discussion of basic questions in the problem of special schools is still in its infancy. In his opinion this is because the problem has been largely considered by physicians and psychiatrists, and therefore only extreme cases have been discussed. The practical arrangements naturally suffered in consequence. One of the main difficulties is that the auxiliary school has been differentiated from the public school but not from other educational institutions. The author believes that the auxiliary school takes up the problem concerning its pupils, program and aims, just where the public school fails. The methods differ because the nature of the pupils differs. He objects to the term *Heilpädagogik*, since this term might arouse the erroneous conception that the auxiliary school tries to re-establish normal conditions. Any child that

cannot come up to the standard as established by the average public school, in spite of all methods designed to help him, should be sent to the auxiliary school. The author recommends the following selective methods: (1) reporting the pupils who probably cannot be promoted at the end of the school year; (2) keeping an observation record of such pupils; (3) examining them at the end of the school year; (4) a medical and psychological examination in connection with this; (5) decision on the case by a committee; (6) final decision by the school board if there are any doubts in the mind of the committee.—O. Seeling (Berlin).

4642. Lämmermann, H. *Das Mannheimer kombinierte Verfahren der Begabtenauslese. Eine statistische Untersuchung über die Bewährung an höheren Schulen.* (The combined procedure of aptitude testing in Mannheim. A statistical study of validation in higher schools.) *Beihefte z. Zsch. f. angew. Psychol.*, 1927, No. 40. Pp. 197.—The investigation is directed at a determination of the value of certain indices of scholastic ability, obtained in elementary schools, in predicting achievement in high school (Gynasium, Realschule, etc.). The indices used: (1) average of school marks, (2) judgments of general ability made by teachers in the elementary schools, (3) a psychological (intelligence) test, and (4) a pedagogical examination. These indices are compared, severally and in combination, with success in the first year of high school measured in terms of average school marks and judgments of high school instructors. The following table summarizes the results when the various indices are used separately; in general the predictive value increases, especially in precision, when two or more are combined.

	r	q	Pos. Sel.		Neg. Sel.	
			I	P	I	P
Avg. marks.	0.44	0.60	83.0	.54	55.3	.26
Gen. ability..	0.44	0.58	78.9	.57	57.7	.21
Psy. test....	0.39	0.55	85.9	.48	27.0	.34
Ped. exam. . .	0.35	0.57	88.9	.47	23.0	.40

r = Bravais-Pearson coefficient of correlation. q = Yule's coefficient of association. Pos. Sel. = Positive Selection. Neg. Sel. = Negative Selection. I = Inclusiveness of the selection, i.e., the percentage of pupils designated "capable" (in the case of Pos. Sel.; "not capable" in Neg. Sel.) in high school who belonged in the same category according to their elementary school scores. P = Precision of the selection; this coefficient is obtained from the formula, $\frac{M-N}{M+N+O}$, in which M is the absolute number of cases belonging in the same category ("capable" or "not capable") in high school as in elementary school, N the number belonging in opposite categories in the two instances, and O the number of cases designated "uncertain" in high school. The data are given a very thorough statistical treatment.—H. W. Nissen (Yale).

4643. Mann, O. *Die experimentell-psychologische Untersuchung der Schulneulinge.* (Experimental

psychological study of beginners in school.) *Scholle*, 1929, 5, 455-478.—A. Römer (Leipzig).

4644. Muñoz, J. J. *Intereses del niño por la escuela.* (The interests of the child in the school.) *Rev. de ped.*, 1929, 92, 351-355.—Over 1,300 children of the schools of the province of Gerona, Spain, answered the following question, "Why do you wish to go to school?" Four hundred eighty-five answered, "For purposes of learning"; two hundred sixty-five gave an economic reason; four hundred thirty-six replied that they liked some social aspects of the school; one hundred and two claimed a desire for emulation. The remainder of the answers were scattered through many different categories.—J. W. Nagge (Chicago).

4645. N[ewton], G. Y. *The school for the deaf and the blind.* *Philippine Pub. Schools*, 1929, 2, 183-184.—A brief description of the admission regulations, course of study, and methods used in speech correction in the school for the deaf and blind at Pasay, Rizal.—L. W. Gellermann (Clark).

4646. O'Shaughnessy, L. *Size of college classes and the percentage of failures.* *School & Soc.*, 1929, 30, 374.—Using the data from 234 lecture and 90 laboratory sections, the author computed the correlation between size of class and the percentage of students failed. The r's for the lecture and laboratory sections are, respectively, $+.187 \pm .042$ and $+.331 \pm .063$. It is suggested that in the laboratory the size of the section affects the number of failures more than it does in the regular lecture room.—H. L. Koch (Texas).

4647. Palmer, A. R. *Progressive practices in directing learning.* New York: Macmillan, 1929. Pp. xvii + 300. \$2.00. An account of what the author calls the "learning-product technique." Learning activities are classified as producing "ability to do," "understanding," or "personal acceptance of worth and value." The book is intended to be a practical guide for the classroom teacher.—E. R. Guthrie (Washington).

4648. Petersen, P. *Fundamentos generales educativos y pedagógicos del Jena-Plan.* (General educational and pedagogical fundamentals of the Jena plan.) *Rev. de ped.*, 1929, 92, 361-366.—J. W. Nagge (Chicago).

4649. Remmers, H. H. *Departmental differences in the quality of instruction as seen by students.* *School & Soc.*, 1929, 30, 332-334.—About 115 different instructors in 293 classes at Purdue University were rated by their students on 8 personality traits presumably influential in determining teaching effectiveness. It is concluded that: (1) inter-departmental variations in these traits are extreme; (2) departmental patterns of teaching personality exist; and (3) within a department desirable traits tend to vary together although variations from trait to trait are also likely to be significant.—H. L. Koch (Texas).

4650. Ruch, G. M. *The objective or new-type examination. An introduction to educational measurements.* New York: Scott, Foresman, 1929. Pp. 478. \$2.20.—"This volume is intended for two gen-

eral classes of readers: first, the teacher wishing to make a serious study of the theory and practice of objective examining, and second, the student who is beginning his study of educational measurement." Proceeding from the usual school examinations with which the teacher and the student are already familiar, the book develops the concepts of measurement and statistics. Part I, "The argument for objective examinations," contains chapters on: examinations in general, the criteria of a good examination, objections to the traditional examination, advantages and limitations of objective examinations, students' attitudes toward examinations, and relative values of standardized and non-standardized tests. Part II, "How to construct an objective examination," contains chapters on: the building of an objective examination, illustrative types of objective tests, selected complete examinations, and rules for drafting objective test items. Part III, "Experimental and theoretical considerations," consists of chapters on: experimental studies of new-type examinations, chance and guessing in recognition tests, the negative and other suggestion effects in the true-false tests, and examinations, marks and marking systems. Part IV is devoted to "Statistical treatment and interpretation of objective test results." A classified, annotated bibliography of 377 titles is included, in which "most of the more significant literature is covered."—*L. W. Gellermann (Clark)*.

4651. **Scott, H. A.** A personnel study of directors of physical education for men in colleges. *Amer. Phys. Educ. Rev.*, 1929, 34, 352-355.—A study based on 178 questionnaires sent to physical directors in colleges. Results show that 96.2% of present-day directors hold baccalaureate degrees, 22.7% the master's degree, and 10.7% the doctor's degree. The median age and salary on attaining the various academic ranks were as follows:

	Instructor	Assistant Professor	Associate Professor	No. Professor	No. Rank
No. of cases....	26	29	19	111	29
Per cent.....	15.0	16.8	11.0	64.2	16.8
Median age ...	25.3	30.1	31.3	32.9	
Median salary...	\$1,900.00	\$2,420.00	\$3,025.00	\$3,350.00	

Other findings are: Most directors are married and have one or two children. They are church members, mostly in Protestant churches. In lodge membership most of them belong to the Masonic order.—*R. Stone (Lehigh)*.

4652. **Selke, E.** A study of the vocabulary of ten spellers. *Elem. School J.*, 1929, 29, 767-771.—Ten recently published spellers were examined. 8,427 different words were found; 1,080 (13%) were common to all spellers. Of these words, only three were placed in the same grade by the ten books. 267 words were located in two successive grades and two-thirds of the words were placed within two or three successive grades. Little agreement was evidenced in the placing of the remaining one-third of the words.—*P. A. Witty (Kansas)*.

4653. **Shannon, J. R.** Teachers college students' estimates of their own scholastic merit. *School & Soc.*, 1929, 30, 275-276.—A comparison is made between the estimates which 34 students in a course in

education made of each other's scholastic accomplishment and those made by the instructor in charge of the class. The instructor's estimates were the same as the modal estimates of the students in more than two-thirds of the cases; in only one instance, a case having a very poor attendance record, was the disagreement as much as two steps. The students seemed reluctant to give the rating of failure to each other.—*H. L. Koch (Texas)*.

4654. **Sirkin, M.** The relation between intelligence, age, and home environment of elementary school pupils. *School & Soc.*, 1929, 30, 304-308.—854, 682, and 347 fourth-, fifth-, and sixth-graders, respectively, were the subjects of the study. The investigation revealed that the correlation between the social status (measured in terms of the occupation and education of parents) and the intelligence test scores of pupils belonging to the same school grade and thus possessed of the same formal schooling was +.40. Under the same conditions the co-efficients of correlation between age and test score was -.26. Partialling out social status reduced the latter "r" only to -.20. The correlations between test score and age or social status did not diminish for the same group over a period of 14 months. In fact, a slight but statistically insignificant rise was shown.—*H. L. Koch (Texas)*.

4655. **Smith, J. M.** Which hand is the eye of the blind? *Genet. Psychol. Monog.*, 1929, 5, 213-252.—It was found that, for right-handed persons, (1) motion with either arm is more efficient when determined by the extensor than by the flexor muscles; (2) one can read more efficiently with the finger-tips of the left hand, and (3) one can write more efficiently with the stylus in the fingers of the right hand. To obtain the greatest economy in learning and in later life, one ought to teach blind children from the beginning to write with the right hand from left to right, and to read with the left hand from right to left. The reversal of the point symbols presents no new difficulty, as it is necessary for the blind, for writing and for reading, to become familiar with each symbol in its two forms.—*G. L. Barclay (Nebraska)*.

4656. **Sterling, E. L., & Cole, M. E.** Diagnostic and measurement tests to accompany English for daily use. New York: Holt, 1929. Pp. 111. (Apply.)—Included in this pad are three diagnostic and two measurement tests on recognition of parts of speech, nine diagnostic and five measurement tests on usage of parts of speech, six diagnostic and five measurement tests on spelling, ten diagnostic and two measurement tests on punctuation, and two diagnostic and nine measurement tests on the sentence.—*D. W. Jensen (Central Michigan State Teachers College)*.

4657. **Thorndike, E. L., & Gates, A. I.** Elementary principles of education. New York: Macmillan, 1929. Pp. x + 335. \$1.60.—"Life is activity initiated and sustained to satisfy wants." "The ultimate aim of education is to realize a condition in which human wants may be most fully satisfied." The immediate aims of education, however, must vary with conditions. The present aims of education

are discussed. One chapter lists the major human wants. Three chapters are given to learning, and one each to age differences and individual differences. Choice of subjects, methods of teaching, measurement, and the functions of schools are the other main topics.—*W. Dennis* (Virginia).

4658. **Thorp, A.** *Occupation centers in England.* *Tr. School Bull.*, 1929, 26, 11-12.—Day schools do not meet the needs of the low-grade child too intelligent for an institution and yet ineducable in a class. England has not enough institutional care for the worst of these cases. The city of Birmingham has started occupation centers; each has 20 children, who attend morning and afternoon sessions. No academic work is given, but there is instruction in good habits, neatness, personal hygiene and understanding of signs in the street. Simple crafts have also been taught. The work is still in the experimental stage, but it seems to promise a sound solution—at a low cost—to a difficult problem.—*E. M. Achilles* (Columbia).

4659. **Van Wagenen, M. J.** *Comparative pupil achievement in rural, town, and city schools.* Minneapolis, Minn.: Univ. of Minnesota Press, 1929. Pp. 144. \$1.50.—Reports an investigation made by the State Department of Education in Minnesota to determine the comparative attainments of: (1) pupils in eight-months and nine-months rural schools; (2) pupils in rural schools and in graded town schools. Achievement tests in reading, American history, geography, arithmetic, spelling, and English composition, and the Kuhlmann-Anderson intelligence test, were administered to approximately 2,500 pupils in eight-months rural schools, 1,500 in nine-months rural schools, and 2,000 each in four groups of town and small city schools. The resulting data are presented in detailed tables and in summaries. Pupils with nine-months rural school training showed an advancement of a third of a year over pupils in eight-months rural schools. Differences in achievement in favor of graded schools over rural schools also appeared. Special chapters are devoted to: (1) norms of attainment for the elementary schools of Minnesota; (2) attainments of individual (Minnesota) school systems; (3) attainments of beginning rural school teachers in the elementary subjects of instruction.—*L. W. Gellermann* (Clark).

4660. **Wheeler, H. E.** *The psychological case against the fairy tale.* *Elem. School J.*, 1929, 29, 754-756.—Overstreet and Adler have stated emphatically that fanciful material in primary reading books is deleterious to the most wholesome development of the child.—*P. A. Witty* (Kansas).

4661. **Wiggam, A. E.** *Fitting the college to your boy and girl.* *Scient. Mo.*, 1929, 29, 349-358.—An exposition of some of Seashore's ideals.—*J. F. Dashiell* (North Carolina).

[See also abstracts 4327, 4361, 4393, 4551, 4589, 4603.]

BIOMETRY AND STATISTICS

4662. **Kelley, T. L., & Shen, E.** *General statistical principles.* In *The Foundations of Experi-*

mental Psychology. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 832-854.—Errors in the data to be used may be chance or systematic errors of observation or sampling. Some of these can be avoided. A brief explanation is given of the various measures of central tendency such as median, mode and arithmetical, geometrical and harmonic mean. A discussion of the measures of dispersion is followed by an explanation of the methods of relationship including rectilinear correlation, the correlation ratio and the method of contingency.—*M. B. Mitchell* (Yale).

4663. **Kelley, T. L., & Shen, E.** *The statistical treatment of certain typical problems.* In *The Foundations of Experimental Psychology.* Worcester, Mass.: Clark Univ. Press, 1929. Pp. 855-883.—Examples are given of the application to practical problems of partial correlation, multiple correlation, and psychophysical methods. Measures of reliability and validity and other problems concerning tests are explained. Differentiable abilities are discussed. Bibliography.—*M. B. Mitchell* (Yale).

4664. **Lovitt, W. V., & Holtzclaw, H. F.** *Statistics.* New York: Prentice-Hall, 1929. Pp. xi + 304. \$4.00.—A presentation of the general principles of statistics, principally as applied in economics. The treatment of the book is such as to require little knowledge of mathematics, and the illustrations are drawn from actual data gathered in the fields of economics, biology, business, education, medicine and sociology. Some of the topics are: primary and secondary data, sampling, tabulation, graphic representation, bar charts and maps, line graphs, averages, dispersion and skewness, correlation, index numbers, seasonal and cyclical fluctuations, binomial distribution, characteristic curves, curve fitting, probable error, etc. In the appendix a variety of illustrative data are presented. Logarithmic and other tables are also appended. Bibliography.—*N. L. Munn* (Pittsburgh).

4665. **Robertson, W. L.** *Quality control by sampling.* *Factory & Indus. Management*, 1928, 76, 503-505; 724-726.—An application of the theory of probability to determine the size of sample which must be examined to give an index of the lot. The method and examples are from the Western Electric Company.—(Courtesy *Social Science Abstracts*).

4666. **Tryon, R. C.** *The interpretation of the correlation coefficient.* *Psychol. Rev.*, 1929, 36, 419-445.—The author's summary and conclusions are as follows: To elucidate the meaning of the correlation coefficient, r_{xy} , between any two variables X and Y, by interpreting it in terms of the per cent of Y determined by X, a series of formulae have been derived. The per cent of Y determined by X is called the degree of determination of Y by X. This degree is defined as the per cent of perfect correlation possible with Y which X alone contributes, or as the per cent of total variance of Y which the variance of X alone contributes. These two definitions have been shown to be mathematically identical. Where X influences Y in general through a common variable C, general formulae are given which denote the determination of Y by X, and of Y by residual factors other than X which determine the remainder

of Y. The degree of determination of Y by C is for the general case equal to r_{cy}^2/r_{cx}^2 , that by residuals is equal to $1 - (r_{cx}^2/r_{cy}^2)$. To use these and related formulae, one must either assume the magnitude of the coefficient, r_{cx}^2 , to be a given value, or one must obtain the actual value itself by using a method devised by Spearman. With this value at hand all the degrees of determination may be arrived at. Where only the method of assumption is used, then various limiting and middle special cases are available which may be used to illustrate the range within which the interpretation of r_{cy} may vary. It is illogical to choose blindly either r or r^2 as the natural index of correlation between X and Y. The true index of the relation is the degree of determination of one of the variables by the other, for example, of Y by X. Where X is itself the common factor, then r^2 is the percentage determination of Y by X; where X and Y are equally determined by C, then r is the percentage determination of Y by X; and where Y is C, then the determination of Y by X is unity.—H. Helson (Bryn Mawr).

[See also abstract 4453.]

MENTAL TESTS

4667. Banister, H. Two tests for hand and eye coordination. *J. Gen. Psychol.*, 1929, 2, 353-354.—Dart throwing at a moving target and ball dropping onto a moving target. One figure.—H. Cason (Rochester).

4668. Banister, H. A "timing" test. *J. Gen. Psychol.*, 1929, 2, 354-356.—The timing ability consists in hitting a moving ball with an implement so that it is deflected in a specified direction. Three figures.—H. Cason (Rochester).

4669. Banister, H. An indirect aiming test. *J. Gen. Psychol.*, 1929, 2, 356-357.—2 figures.—H. Cason (Rochester).

4670. Banister, H. A test for shooting ability. *J. Gen. Psychol.*, 1929, 2, 358-360.—3 figures.—H. Cason (Rochester).

4671. Broom, M. E. The Seashore measures of musical talent. *School & Soc.*, 1929, 30, 274-275.—About 80 college students above junior level and 100 ninth-graders were given the Seashore tests of musical talent. The older group rated significantly higher than the younger in accomplishment on the tests of pitch, intensity, and time discrimination; slightly better on the tests of rhythm and tonal memory; and not quite so high on the consonance test. The test intercorrelations for the younger group ranged from $+ .86$ to $+ .96$ —a fact suggesting, according to the author, that the tests measure at the lower ages essentially the same thing. A like result, however, was not obtained in the case of the adult group; the inter-test correlations for this group ranged from $+ .085$ to $+ .41$. No explanations of the differences in the returns from the two groups are offered.—H. L. Koch (Texas).

4672. Chauncey, M. R. The relation of the home factor to achievement and intelligence test scores. *J. Educ. Res.*, 1929, 20, 88-90.—Correlation of the home situation, measured by the Sims Score Card

for Measuring the Socio-Economic Status, with achievement scores on the Stanford Achievement Test, and intelligence, measured by the McCall Multi-mental Scale. The group consisted of 113 pupils of the 8th grade and 130 pupils of the 9th grade at Stillwater, Oklahoma. "Since home status, rather than age, appears to function as the causal factor, we may conclude that inferior homes tend to retard, and superior homes tend to accelerate, the progress of children through schools."—S. W. Fernberger (Pennsylvania).

4673. Dunlap, J. W., De Melo, A., & Cureton, E. E. The effects of different directions and scoring methods on the reliability of a true-false test. *School & Soc.*, 1929, 30, 378-382.—After a comparative study of 10 different methods of scoring and administering true-false examinations, the authors noted the following: (1) Scoring according to the number-right method when the students are required to mark each item in the test makes for speed and accuracy in computing the final ratings. (2) Tests administered with directions not to guess and scored by the number-right method show a spuriously high reliability. (3) Direction to guess raise the mean score made on an examination and lower the reliability of the returns. Since in the class room directions not to guess are seldom followed, the authors believe to be meritorious a new method of systematic guessing coupled with directions for marking all items in the test and with scoring by the number-right method. The scheme for systematic guessing may be described thus: the known items are marked; the number of items marked "true" and those marked "false" are counted; and all of the unknown items are then labelled in the same manner as the lesser number counted.—H. L. Koch (Texas).

4674. Freeman, F. N. The individual in school. II. Special abilities and their measurement. In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 705-737.—Special aptitude tests are assumed to measure differences in native constitution while achievement tests either make no assumption as to the origin of the ability tested or assume it to be due to education. A brief history is given of special aptitude and educational tests. A discussion of the general and detailed characteristics of standardization leads to an explanation of the methods of standardization. Educational tests are useful for comparing achievement in different communities, different methods of teaching, and efficiency of teachers. They are also useful in motivating learning and diagnosing individual cases. Correlations between scores on various tests reveal special abilities which should be analyzed into types of abilities. Bibliography.—M. B. Mitchell (Yale).

4675. Goodenough, F. L. The emotional behavior of young children during mental tests. *J. Juv. Res.*, 1929, 13, 204-219.—Approximately 1,000 children, 18 months to 6 years of age, who were given from one to five mental tests, were rated on the shyness, negativism, and distractability they exhibited while taking the tests. A five-point scale with defined steps was used. It was found that the degree of the

three traits shown under the conditions just described is a function of age, sex, social status, and position in the family sequence. Because of the low correlation between ratings received by children who took two tests separated by an average of 42.6 weeks, as well as because of other evidences of individual and group variability, the author concludes that the individual differences in behavior revealed by the ratings are more attributable to differences in training and experience than to innate tendencies.—*H. L. Koch* (Texas).

4676. **Pintner, R.** *The individual in school: I. General ability.* In *The Foundations of Experimental Psychology*. Worcester, Mass.: Clark Univ. Press, 1929. Pp. 661-704.—Binet established the first scale for measuring general ability in terms of mental age. At present there are many individual and group tests for all levels of intelligence. The tests for low levels are mainly non-verbal and some are non-language, while those for high levels are mostly verbal. The scores on intelligence tests are commonly turned into mental age and intelligence quotient scores. The standard deviation evaluation, however, is more reliable. Intelligence tests are useful in classifying school children for special classes, grades, and groups within a grade. They are also being used extensively by colleges and universities. Studies have been made of the comparative ability of the various races, especially of the negro and white. Blind, deaf, and delinquent children tend to test slightly below the norm. In a discussion of the definitions of intelligence, those of Thorndike and Spearman are emphasized. The intelligence of the population as a whole falls into a normal curve. The development of an individual is rapid at first then seems to reach its level somewhere between 14 and 20 years of age. The IQ is about constant, but the tests are subject to practice effects and are influenced by the environment. A rather high positive correlation between the intelligence of siblings and a still higher one for twins, along with a study of family histories, points toward an inheritance of intelligence. Bibliography.—*M. B. Mitchell* (Yale).

4677. **Schneck, M. M. R.** *The measurement of verbal and numerical abilities.* *Arch. of Psychol.*, 1929, No. 107. Pp. 49.—The interest of the study

lies in the inter-relationships existing between two manifestations of intellectual functions. These functions may be termed verbal ability and numerical ability. 210 male students at the College of the City of New York were tested; all were of Hebrew extraction, their parents being from Russia, Poland or Balkan countries; their ages were from 18 to 21. Nine tests were given. Five were intended to measure verbal ability, vocabulary, opposites, analogies, sentence completion, disarranged sentences; four, numerical ability, arithmetical reasoning, number series completion, equation relations, mental multiplication. The following conclusions were drawn: General factors for verbal ability (V) and for numerical ability (N) were found. V and N had little in common (correlation .2625); they are not merely measures of general ability. There is a noticeable but not marked correspondence between verbal ability and performance in literary courses in college. The same condition holds with respect to numerical ability and the performance in science courses, including mathematics. The best single test of verbal ability is a vocabulary test. The best single test of numerical ability is the arithmetic test. For each ability the entire battery of tests is more efficient than any single test. A bibliography is appended.—*E. M. Achilles* (Columbia).

4678. **Sims, V. M.** *The reliability and validity of four types of vocabulary tests.* *J. Educ. Res.*, 1929, 20, 91-96.—A comparison of (1) identification tests (Terman's word list from the Stanford Revision), (2) Thorndike Test of Word Knowledge (multiple-response tests), (3) Detroit Word Recognition Test (matching), and (4) Whipple Range of Information Test (checking). The subjects were 110 children from grades 5-8. The four tests come out with fairly constant averages but with variation in the S.D. ranging from 9.0 (identification) to 15.0 (checking). All four tests show a coefficient of reliability of more than 0.84, the lowest being the multiple-response. The intercorrelations are rather high for all but the checking test. The author believes that there is some evidence "that the matching test gives the most satisfactory group measure of vocabulary."—*S. W. Fernberger* (Pennsylvania).

[See also abstracts 4607, 4631.]



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